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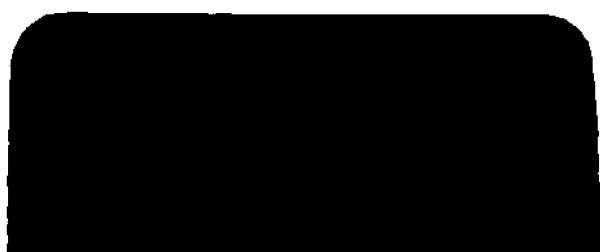
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# MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES

TO THE

TWO HOUSES OF CONG

AT THE COMMENCEMENT OF THE

THIRD SESSION OF THE FORTY-SIXTH CONGRESS,

WITH THE

REPORTS OF THE HEADS OF DEPARTMENTS

AND

SELECTIONS FROM ACCOMPANYING DOCUMENTS.

39959

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EDITED BY

BEN: PERLEY POORE.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1880.

Prepared in accordance with the provisions of the Revised Statutes, approved June 23, 1874.

SEC. 75. The Joint Committee on Public Printing shall appoint a competent person, who shall edit such portion of the documents accompanying the annual reports of the Departments as they may deem suitable for popular distribution, and prepare an alphabetical index thereto.

\* \* \* \* \*

SEC. 196. The head of each Department, except the Department of Justice, shall furnish to the Congressional Printer copies of the documents usually accompanying his annual report on or before the first day of November in each year, and a copy of his annual report on or before the third Monday of November in each year.

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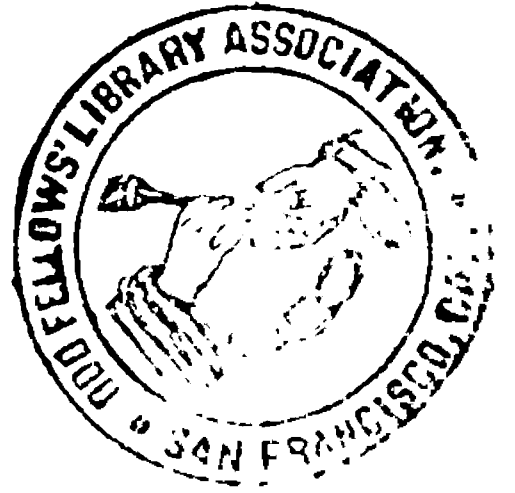
SEC. 3798. Of the documents named in this section there shall be printed and bound, in addition to the usual number for Congress, the following numbers of copies, namely:

\* \* \* \* \*

Second. Of the President's message, the annual reports of the Executive Departments, and the abridgment of accompanying documents, unless otherwise ordered by either house, ten thousand copies for the use of the members of the Senate and twenty-five thousand copies for the use of the members of the House of Representatives.



38855



# MESSAGE

OF

## THE PRESIDENT OF THE UNITED STATES.

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*Fellow-Citizens of the Senate and House of Representatives :*

I congratulate you on the continued and increasing prosperity of our country. By the favor of Divine Providence we have been blessed, during the past year, with health, with abundant harvests, with profitable employment for all our people, and with contentment at home, and with peace and friendship with other nations. The occurrence of the twenty-fourth election of Chief Magistrate has afforded another opportunity to the people of the United States to exhibit to the world a significant example of the peaceful and safe transmission of the power and authority of government from the public servants whose terms of office are about to expire, to their newly chosen successors. This example cannot fail to impress profoundly thoughtful people of other countries with the advantages which republican institutions afford. The immediate, general, and cheerful acquiescence of all good citizens in the result of the election, gives gratifying assurance to our country, and to its friends throughout the world, that a government based on the free consent of an intelligent and patriotic people possesses elements of strength, stability, and permanency not found in any other form of government.

Continued opposition to the full and free enjoyment of the rights of citizenship, conferred upon the colored people by the recent amendments to the Constitution, still prevails in several of the late slave-holding States. It has, perhaps, not been manifested in the recent election to any large extent in acts of violence or intimidation. It has, however, by fraudulent practices in connection with the ballots, with the regulations as to the places and manner of voting, and with counting, returning, and canvassing the votes cast, been successful in defeating the exercise of the right preservative of all rights—the right of suffrage—which the Constitution expressly confers upon our enfranchised citizens.

It is the desire of the good people of the whole country that sectionalism as a factor in our politics should disappear. They prefer that no section of the country should be united in solid opposition to any other section. The disposition to refuse a prompt and hearty obedience to the equal-rights amendments to the Constitution is all that now stands in the way of a complete obliteration of sectional lines in our political contests. As long as either of these amendments is flagrantly violated

or disregarded, it is safe to assume that the people who placed them in the Constitution, as embodying the legitimate results of the war for the Union, and who believe them to be wise and necessary, will continue to act together, and to insist that they shall be obeyed. The paramount question still is as to the enjoyment of the right by every American citizen who has the requisite qualifications to freely cast his vote and to have it honestly counted. With this question rightly settled, the country will be relieved of the contentions of the past; bygones will indeed be bygones; and political and party issues, with respect to economy and efficiency of administration, internal improvements, the tariff, domestic taxation, education, finance, and other important subjects, will then receive their full share of attention; but resistance to and nullification of the results of the war will unite together in resolute purpose for their support all who maintain the authority of the government and the perpetuity of the Union, and who adequately appreciate the value of the victory achieved. This determination proceeds from no hostile sentiment or feeling to any part of the people of our country or to any of their interests. The inviolability of the amendments rests upon the fundamental principle of our government. They are the solemn expression of the will of the people of the United States.

The sentiment that the constitutional rights of all our citizens must be maintained, does not grow weaker. It will continue to control the government of the country. Happily, the history of the late election shows that in many parts of the country where opposition to the fifteenth amendment has heretofore prevailed, it is diminishing, and is likely to cease altogether, if firm and well-considered action is taken by Congress. I trust the House of Representatives and the Senate, which have the right to judge of the elections, returns, and qualifications of their own members, will see to it that every case of violation of the letter or spirit of the fifteenth amendment is thoroughly investigated, and that no benefit from such violation shall accrue to any person or party. It will be the duty of the Executive, with sufficient appropriations for the purpose, to prosecute unsparingly all who have been engaged in depriving citizens of the rights guaranteed to them by the Constitution.

It is not, however, to be forgotten that the best and surest guarantee for the primary rights of citizenship is to be found in that capacity for self-protection which can belong only to a people whose right to universal suffrage is supported by universal education. The means at the command of the local and State authorities are, in many cases, wholly inadequate to furnish free instruction to all who need it. This is especially true where, before emancipation, the education of the people was neglected or prevented, in the interest of slavery. Firmly convinced that the subject of popular education deserves the earnest attention of the people of the whole country, with a view to wise and comprehensive action by the Government of the United States, I respectfully recommend that Congress, by suitable legislation and with proper safeguards,

supplement the local educational funds in the several States where the grave duties and responsibilities of citizenship have been devolved on uneducated people, by devoting to the purpose grants of the public lands, and, if necessary, by appropriations from the Treasury of the United States. Whatever government can fairly do to promote free popular education ought to be done. Wherever general education is found, peace, virtue, and social order prevail, and civil and religious liberty are secure.

In my former annual messages, I have asked the attention of Congress to the urgent necessity of a reformation of the civil-service system of the government. My views concerning the dangers of patronage, or appointments for personal or partisan considerations, have been strengthened by my observation and experience in the Executive office, and I believe these dangers threaten the stability of the government. Abuses so serious in their nature cannot be permanently tolerated. They tend to become more alarming with the enlargement of administrative service, as the growth of the country in population increases the number of officers and placemen employed.

The reasons are imperative for the adoption of fixed rules for the regulation of appointments, promotions, and removals, establishing a uniform method, having exclusively in view, in every instance, the attainment of the best qualifications for the position in question. Such a method alone is consistent with the equal rights of all citizens, and the most economical and efficient administration of the public business.

Competitive examinations, in aid of impartial appointments and promotions, have been conducted for some years past in several of the executive departments, and by my direction this system has been adopted in the custom-houses and post-offices of the larger cities of the country. In the city of New York over two thousand positions in the civil service have been subject, in their appointments and tenure of place, to the operation of published rules for this purpose, during the past two years. The results of these practical trials have been very satisfactory, and have confirmed my opinion in favor of this system of selection. All are subjected to the same tests, and the result is free from prejudice by personal favor or partisan influence. It secures for the position applied for, the best qualifications attainable among the competing applicants. It is an effectual protection from the pressure of importunity which, under any other course pursued, largely exacts the time and attention of appointing officers, to their great detriment in the discharge of other official duties, preventing the abuse of the service for the mere furtherance of private or party purposes, and leaving the employé of the government, freed from the obligations imposed by patronage, to depend solely upon merit for retention and advancement, and with this constant incentive to exertion and improvement.

These invaluable results have been attained in a high degree in the

offices where the rules for appointment by competitive examination have been applied.

A method which has so approved itself by experimental tests at points where such tests may be fairly considered conclusive, should be extended to all subordinate positions under the government. I believe that a strong and growing public sentiment demands immediate measures for securing and enforcing the highest possible efficiency in the civil service and its protection from recognized abuses, and that the experience referred to has demonstrated the feasibility of such measures.

The examinations in the custom-houses and post-offices have been held under many embarrassments and without provision for compensation for the extra labor performed by the officers who have conducted them, and whose commendable interest in the improvement of the public service has induced this devotion of time and labor without pecuniary reward. A continuance of these labors gratuitously ought not to be expected, and, without an appropriation by Congress for compensation, it is not practicable to extend the system of examinations generally throughout the civil service. It is also highly important that all such examinations should be conducted upon a uniform system and under general supervision. Section 1753 of the Revised Statutes authorizes the President to prescribe the regulations for admission to the civil service of the United States, and for this purpose to employ suitable persons to conduct the requisite inquiries with reference to "the fitness of each candidate, in respect to age, health, character, knowledge, and ability for the branch of service into which he seeks to enter," but the law is practically inoperative for want of the requisite appropriation.

I therefore recommend an appropriation of \$25,000 per annum to meet the expenses of a commission, to be appointed by the President in accordance with the terms of this section, whose duty it shall be to devise a just, uniform, and efficient system of competitive examinations, and to supervise the application of the same throughout the entire civil service of the government. I am persuaded that the facilities which such a commission will afford for testing the fitness of those who apply for office will not only be as welcome a relief to members of Congress as it will be to the President and heads of departments, but that it will also greatly tend to remove the causes of embarrassment which now inevitably and constantly attend the conflicting claims of patronage between the legislative and executive departments. The most effectual check upon the pernicious competition of influence and official favoritism, in the bestowal of office, will be the substitution of an open competition of merit between the applicants, in which every one can make his own record with the assurance that his success will depend upon this alone.

I also recommend such legislation as, while leaving every officer as free as any other citizen to express his political opinions and to use his means for their advancement, shall also enable him to feel as safe as any private citizen in refusing all demands upon his salary for political

purposes. A law which should thus guarantee true liberty and justice to all who are engaged in the public service, and likewise contain stringent provisions against the use of official authority to coerce the political action of private citizens or of official subordinates, is greatly to be desired.

The most serious obstacle, however, to an improvement of the civil service, and especially to a reform in the method of appointment and removal, has been found to be the practice, under what is known as the spoils system, by which the appointing power has been so largely encroached upon by members of Congress. The first step in the reform of the civil service must be a complete divorce between Congress and the Executive in the matter of appointments. The corrupting doctrine that "to the victors belong the spoils" is inseparable from Congressional patronage as the established rule and practice of parties in power. It comes to be understood by applicants for office, and by the people generally, that Representatives and Senators are entitled to disburse the patronage of their respective districts and States. It is not necessary to recite at length the evils resulting from this invasion of the Executive functions. The true principles of government on the subject of appointments to office, as stated in the national conventions of the leading parties of the country, have again and again been approved by the American people, and have not been called in question in any quarter. These authentic expressions of public opinion upon this all-important subject are the statement of principles that belong to the constitutional structure of the government.

Under the Constitution the President and heads of departments are to make nominations for office. The Senate is to advise and consent to appointments, and the House of Representatives is to accuse and prosecute faithless officers. The best interest of the public service demands that these distinctions be respected; that Senators and Representatives, who may be judges and accusers, should not dictate appointments to office.

To this end the co-operation of the legislative department of the government is required, alike by the necessities of the case and by public opinion. Members of Congress will not be relieved from the demands made upon them with reference to appointments to office until, by legislative enactment, the pernicious practice is condemned and forbidden.

It is, therefore, recommended that an act be passed defining the relations of members of Congress with respect to appointment to office by the President, and I also recommend that the provisions of section 1767 and of the sections following of the Revised Statutes, comprising the tenure-of-office act of March 2, 1867, be repealed.

Believing that to reform the system and methods of the civil service in our country is one of the highest and most imperative duties of statesmanship, and that it can be permanently done only by the co-operation of the legislative and executive departments of the government, I again commend the whole subject to your considerate attention.



It is the recognized duty and purpose of the people of the United States to suppress polygamy where it now exists in our Territories, and to prevent its extension. Faithful and zealous efforts have been made by the United States authorities in Utah to enforce the laws against it. Experience has shown that the legislation upon this subject, to be effective, requires extensive modification and amendment. The longer action is delayed, the more difficult it will be to accomplish what is desired. Prompt and decided measures are necessary. The Mormon sectarian organization which upholds polygamy has the whole power of making and executing the local legislation of the Territory. By its control of the grand and petit juries, it possesses large influence over the administration of justice. Exercising, as the heads of this sect do, the local political power of the Territory, they are able to make effective their hostility to the law of Congress on the subject of polygamy, and, in fact, do prevent its enforcement. Polygamy will not be abolished if the enforcement of the law depends on those who practice and uphold the crime. It can only be suppressed by taking away the political power of the sect which encourages and sustains it.

The power of Congress to enact suitable laws to protect the Territories is ample. It is not a case for half-way measures. The political power of the Mormon sect is increasing; it controls now one of our wealthiest and most populous Territories. It is extending steadily into other Territories. Wherever it goes it establishes polygamy and sectarian political power. The sanctity of marriage and the family relation are the corner-stone of our American society and civilization. Religious liberty and the separation of church and state are among the elementary ideas of free institutions. To re-establish the interests and principles which polygamy and Mormonism have imperiled, and to fully reopen to intelligent and virtuous immigrants of all creeds that part of our domain which has been, in a great degree, closed to general immigration by intolerant and immoral institutions, it is recommended that the government of the Territory of Utah be reorganized.

I recommend that Congress provide for the government of Utah by a governor and judges, or commissioners, appointed by the President and confirmed by the Senate—a government analogous to the provisional government established for the territory northwest of the Ohio by the ordinance of 1787. If, however, it is deemed best to continue the existing form of local government, I recommend that the right to vote, hold office, and sit on juries in the Territory of Utah be confined to those who neither practice nor uphold polygamy. If thorough measures are adopted, it is believed that within a few years the evils which now afflict Utah will be eradicated, and that this Territory will in good time become one of the most prosperous and attractive of the new States of the Union.

Our relations with all foreign countries have been those of undisturbed peace, and have presented no occasion for concern as to their continued maintenance.



My anticipation of an early reply from the British Government to the demand of indemnity to our fishermen for the injuries suffered by that industry at Fortune Bay, in January, 1878, which I expressed in my last annual message, was disappointed. This answer was received only in the latter part of April in the present year, and when received exhibited a failure of accord between the two governments as to the measure of the inshore-fishing privilege secured to our fishermen by the Treaty of Washington of so serious a character that I made it the subject of a communication to Congress, in which I recommended the adoption of the measures which seemed to me proper to be taken by this government in maintenance of the rights accorded to our fishermen under the treaty, and towards securing an indemnity for the injury these interests had suffered. A bill to carry out these recommendations was under consideration by the House of Representatives at the time of the adjournment of Congress in June last.

Within a few weeks I have received a communication from Her Majesty's Government, renewing the consideration of the subject, both of the indemnity for the injuries at Fortune Bay and of the interpretation of the treaty in which the previous correspondence had shown the two governments to be at variance. Upon both these topics the disposition towards a friendly agreement is manifested by a recognition of our right to an indemnity for the transaction at Fortune Bay, leaving the measure of such indemnity to further conference, and by an assent to the view of this government, presented in the previous correspondence, that the regulation of conflicting interests of the shore fishing of the provincial sea-coasts, and the vessel fishery of our fishermen, should be made the subject of conference and concurrent arrangement between the two governments.

I sincerely hope that the basis may be found for a speedy adjustment of the very serious divergence of views in the interpretation of the fishery clauses of the Treaty of Washington, which, as the correspondence between the two governments stood at the close of the last session of Congress, seemed to be irreconcilable.

In the important exhibition of arts and industries which was held last year at Sydney, New South Wales, as well as in that now in progress at Melbourne, the United States have been efficiently and honorably represented. The exhibitors from this country at the former place received a large number of awards in some of the most considerable departments, and the participation of the United States was recognized by a special mark of distinction. In the exhibition at Melbourne, the share taken by our country is no less notable, and an equal degree of success is confidently expected.

The state of peace and tranquillity now enjoyed by all the nations of the continent of Europe has its favorable influence upon our diplomatic and commercial relations with them. We have concluded and ratified a convention with the French Republic for the settlement of claims of

the citizens of either country against the other. Under this convention a commission, presided over by a distinguished publicist, appointed, in pursuance of the request of both nations, by His Majesty the Emperor of Brazil, has been organized and has begun its sessions in this city. A congress to consider means for the protection of industrial property has recently been in session in Paris, to which I have appointed the ministers of the United States in France and in Belgium as delegates. The International Commission upon Weights and Measures also continues its work in Paris. I invite your attention to the necessity of an appropriation to be made in time to enable this government to comply with its obligations under the Metrical Convention.

Our friendly relations with the German Empire continue without interruption. At the recent International Exhibition of Fish and Fisheries at Berlin, the participation of the United States, notwithstanding the haste with which the commission was forced to make its preparations, was extremely successful and meritorious, winning for private exhibitors numerous awards of a high class, and for the country at large the principal prize of honor offered by His Majesty the Emperor. The results of this great success cannot but be advantageous to this important and growing industry. There have been some questions raised between the two governments as to the proper effect and interpretation of our treaties of naturalization, but recent dispatches from our minister at Berlin show that favorable progress is making toward an understanding, in accordance with the views of this government, which makes and admits no distinction whatever between the rights of a native and a naturalized citizen of the United States. In practice, the complaints of molestation suffered by naturalized citizens abroad have never been fewer than at present.

There is nothing of importance to note in our unbroken friendly relations with the governments of Austria-Hungary, Russia, Portugal, Sweden and Norway, Switzerland, Turkey, and Greece.

During the last summer several vessels belonging to the merchant marine of this country, sailing in neutral waters of the West Indies, were fired at, boarded, and searched by an armed cruiser of the Spanish Government. The circumstances, as reported, involve not only a private injury to the persons concerned, but also seemed too little observant of the friendly relations existing for a century between this country and Spain. The wrong was brought to the attention of the Spanish Government in a serious protest and remonstrance, and the matter is undergoing investigation by the royal authorities with a view to such explanation or reparation as may be called for by the facts.

The commission sitting in this city for the adjudication of claims of our citizens against the Government of Spain is, I hope, approaching the termination of its labors.

The claims against the United States under the Florida Treaty with Spain were submitted to Congress for its action at the late session, and

I again invite your attention to this long-standing question, with a view to a final disposition of the matter.

At the invitation of the Spanish Government, a conference has recently been held at the city of Madrid to consider the subject of protection by foreign powers of native Moors in the Empire of Morocco. The minister of the United States in Spain was directed to take part in the deliberations of this conference, the result of which is a convention signed on behalf of all the powers represented. The instrument will be laid before the Senate for its consideration. The Government of the United States has also lost no opportunity to urge upon that of the Emperor of Morocco the necessity, in accordance with the humane and enlightened spirit of the age, of putting an end to the persecutions which have been so prevalent in that country of persons of a faith other than the Moslem, and especially of the Hebrew residents of Morocco.

The consular treaty concluded with Belgium has not yet been officially promulgated, owing to the alteration of a word in the text by the Senate of the United States, which occasioned a delay, during which the time allowed for ratification expired. The Senate will be asked to extend the period for ratification.

The attempt to negotiate a treaty of extradition with Denmark failed on account of the objection of the Danish Government to the usual clause providing that each nation should pay the expense of the arrest of the persons whose extradition it asks.

The provision made by Congress, at its last session, for the expense of the commission which had been appointed to enter upon negotiations with the Imperial Government of China, on subjects of great interest to the relations of the two countries, enabled the commissioners to proceed at once upon their mission. The Imperial Government was prepared to give prompt and respectful attention to the matters brought under negotiation, and the conferences proceeded with such rapidity and success that, on the 17th of November last, two treaties were signed at Peking, one relating to the introduction of Chinese into this country, and one relating to commerce. Mr. Trescot, one of the commissioners, is now on his way home bringing the treaties, and it is expected that they will be received in season to be laid before the Senate early in January.

Our minister in Japan has negotiated a convention for the reciprocal relief of shipwrecked seamen. I take occasion to urge once more upon Congress the propriety of making provision for the erection of suitable fire-proof buildings at the Japanese capital for the use of the American legation, and the court-house and jail connected with it. The Japanese Government, with great generosity and courtesy, has offered for this purpose an eligible piece of land.

In my last annual message I invited the attention of Congress to the subject of the indemnity funds received some years ago from China and Japan. I renew the recommendation then made that whatever portions of

these funds are due to American citizens should be promptly paid, and the residue returned to the nations, respectively, to which they justly and equitably belong.

The extradition treaty with the Kingdom of the Netherlands, which has been for some time in course of negotiation, has, during the past year, been concluded and duly ratified.

Relations of friendship and amity have been established between the Government of the United States and that of Roumania. We have sent a diplomatic representative to Bucharest, and have received at this capital the special envoy, who has been charged by His Royal Highness, Prince Charles, to announce the independent sovereignty of Roumania. We hope for a speedy development of commercial relations between the two countries.

In my last annual message I expressed the hope that the prevalence of quiet on the border between this country and Mexico would soon become so assured as to justify the modification of the orders, then in force, to our military commanders in regard to crossing the frontier, without encouraging such disturbances as would endanger the peace of the two countries. Events moved in accordance with these expectations, and the orders were accordingly withdrawn, to the entire satisfaction of our own citizens and the Mexican Government. Subsequently the peace of the border was again disturbed by a savage foray, under the command of the Chief Victorio, but, by the combined and harmonious action of the military forces of both countries, his band has been broken up and substantially destroyed.

There is reason to believe that the obstacles which have so long prevented rapid and convenient communication between the United States and Mexico by railways are on the point of disappearing, and that several important enterprises of this character will soon be set on foot, which cannot fail to contribute largely to the prosperity of both countries.

New envoys from Guatemala, Colombia, Bolivia, Venezuela, and Nicaragua have recently arrived at this capital, whose distinction and enlightenment afford the best guarantee of the continuance of friendly relations between ourselves and these sister republics.

The relations between this government and that of the United States of Colombia have engaged public attention during the past year, mainly by reason of the project of an interoceanic canal across the Isthmus of Panama, to be built by private capital under a concession from the Colombian Government for that purpose. The treaty obligations subsisting between the United States and Colombia, by which we guarantee the neutrality of the transit and the sovereignty and property of Colombia in the isthmus, make it necessary that the conditions under which so stupendous a change in the region embraced in this guarantee should be effected—transforming, as it would, this isthmus, from a barrier between the Atlantic and Pacific oceans, into a gate-

way and thoroughfare between them for the navies and the merchant ships of the world—should receive the approval of this government, as being compatible with the discharge of these obligations on our part, and consistent with our interests as the principal commercial power of the Western Hemisphere. The views which I expressed in a special message to Congress in March last, in relation to this project, I deem it my duty again to press upon your attention. Subsequent consideration has but confirmed the opinion “that it is the right and duty of the United States to assert and maintain such supervision and authority over any interoceanic canal across the isthmus that connects North and South America as will protect our national interest.”

The war between the Republic of Chili on the one hand, and the allied Republics of Peru and Bolivia on the other, still continues. This government has not felt called upon to interfere in a contest that is within the belligerent rights of the parties as independent states. We have, however, always held ourselves in readiness to aid in accommodating their difference, and have at different times reminded both belligerents of our willingness to render such service.

Our good offices, in this direction, were recently accepted by all the belligerents, and it was hoped they would prove efficacious; but I regret to announce that the measures which the ministers of the United States at Santiago and Lima were authorized to take, with the view to bring about a peace, were not successful. In the course of the war some questions have arisen affecting neutral rights; in all of these the ministers of the United States have, under their instructions, acted with promptness and energy in protection of American interests.

The relations of the United States with the Empire of Brazil continue to be most cordial, and their commercial intercourse steadily increases, to their mutual advantage.

The internal disorders with which the Argentine Republic has for some time past been afflicted, and which have more or less influenced its external trade, are understood to have been brought to a close. This happy result may be expected to redound to the benefit of the foreign commerce of that republic as well as to the development of its vast interior resources.

In Samoa, the government of King Malietoa, under the support and recognition of the consular representatives of the United States, Great Britain, and Germany, seems to have given peace and tranquillity to the islands. While it does not appear desirable to adopt as a whole the scheme of tripartite local government, which has been proposed, the common interests of the three great treaty powers require harmony in their relations to the native frame of government, and this may be best secured by a simple diplomatic agreement between them. It would be well if the consular jurisdiction of our representative at Apia were increased in extent and importance so as to guard American interests in the surrounding and outlying islands of Oceanica.



The obelisk, generously presented by the Khedive of Egypt to the city of New York, has safely arrived in this country, and will soon be erected in that metropolis. A commission for the liquidation of the Egyptian debt has lately concluded its work, and this government, at the earnest solicitation of the Khedive, has acceded to the provisions adopted by it, which will be laid before Congress for its information. A commission for the revision of the judicial code of the Reform Tribunal of Egypt is now in session in Cairo. Mr. Farman, consul-general, and J. M. Batchelder, esq., have been appointed as commissioners to participate in this work. The organization of the reform tribunals will probably be continued for another period of five years.

In pursuance of the act passed at the last session of Congress, invitations have been extended to foreign maritime states to join in sanitary conference in Washington, beginning the first of January. The acceptance of this invitation by many prominent powers gives promise of success in this important measure, designed to establish a system of international notification by which the spread of infectious or epidemic diseases may be more effectively checked or prevented. The attention of Congress is invited to the necessary appropriations for carrying into effect the provisions of the act referred to.

The efforts of the Department of State to enlarge the trade and commerce of the United States, through the active agency of consular officers, and through the dissemination of information obtained from them, have been unrelaxed. The interest in these efforts, as developed in our commercial communities, and the value of the information secured by this means to the trade and manufactures of the country, were recognized by Congress at its last session, and provision was made for the more frequent publication of consular and other reports by the Department of State. The first issue of this publication has now been prepared, and subsequent issues may regularly be expected. The importance and interest attached to the reports of consular officers are witnessed by the general demand for them by all classes of merchants and manufacturers engaged in our foreign trade. It is believed that the system of such publications is deserving of the approval of Congress, and that the necessary appropriations for its continuance and enlargement will commend itself to your consideration.

The prosperous energies of our domestic industries, and their immense production of the subjects of foreign commerce, invite, and even require, an active development of the wishes and interests of our people in that direction. Especially important is it that our commercial relations with the Atlantic and Pacific coasts of South America, with the West Indies and the Gulf of Mexico should be direct, and not through the circuit of European systems, and should be carried on in our own bottoms. The full appreciation of the opportunities which our front on the Pacific Ocean gives to commerce with Japan, China, and the East Indies, with Australia and the island groups which lie along these routes of naviga-



tion, should inspire equal efforts to appropriate to our own shipping, and to administer by our own capital, a due proportion of this trade. Whatever modifications of our regulations of trade and navigation may be necessary or useful to meet and direct these impulses to the enlargement of our exchanges and of our carrying trade I am sure the wisdom of Congress will be ready to supply. One initial measure, however, seems to me so clearly useful and efficient that I venture to press it upon your earnest attention. It seems to be very evident that the provision of regular steam postal communication, by aid from government, has been the forerunner of the commercial predominance of Great Britain on all these coasts and seas, a greater share in whose trade is now the desire and the intent of our people. It is also manifest that the efforts of other European nations to contend with Great Britain for a share of this commerce have been successful in proportion with their adoption of regular steam postal communication with the markets whose trade they sought. Mexico and the States of South America are anxious to receive such postal communications with this country, and to aid in their development. Similar co-operation may be looked for, in due time, from the Eastern nations and from Australia. It is difficult to see how the lead in this movement can be expected from private interests. In respect of foreign commerce, quite as much as in internal trade, postal communication seems necessarily a matter of common and public administration, and thus pertaining to government. I respectfully recommend to your prompt attention such just and efficient measures as may conduce to the development of our foreign commercial exchanges and the building up of our carrying trade.

In this connection I desire also to suggest the very great service which might be expected in enlarging and facilitating our commerce on the Pacific Ocean were a transmarine cable laid from San Francisco to the Sandwich Islands, and thence to Japan at the north and Australia at the south. The great influence of such means of communication on these routes of navigation in developing and securing the due share of our Pacific coast in the commerce of the world needs no illustration or enforcement. It may be that such an enterprise, useful and in the end profitable as it would prove to private investment, may need to be accelerated by prudent legislation by Congress in its aid, and I submit the matter to your careful consideration.

An additional and not unimportant, although secondary, reason for fostering and enlarging the Navy may be found in the unquestionable service to the expansion of our commerce which would be rendered by the frequent circulation of naval ships in the seas and ports of all quarters of the globe. Ships of the proper construction and equipment to be of the greatest efficiency in case of maritime war might be made constant and active agents in time of peace in the advancement and protection of our foreign trade, and in the nurture and discipline of young seamen, who would naturally, in some numbers, mix with and im-

prove the crews of our merchant ships. Our merchants at home and abroad recognize the value to foreign commerce of an active movement of our naval vessels, and the intelligence and patriotic zeal of our naval officers in promoting every interest of their countrymen is a just subject of national pride.

The condition of the financial affairs of the government, as shown by the report of the Secretary of the Treasury, is very satisfactory. It is believed that the present financial situation of the United States, whether considered with respect to trade, currency, credit, growing wealth, or the extent and variety of our resources, is more favorable than that of any other country of our time, and has never been surpassed by that of any country at any period of its history. All our industries are thriving; the rate of interest is low; new railroads are being constructed; a vast immigration is increasing our population, capital, and labor; new enterprises in great number are in progress, and our commercial relations with other countries are improving.

The ordinary revenues from all sources, for the fiscal year ended June 30, 1880, were—

From customs.....	\$186, 522, 064 60
From internal revenue.....	124, 009, 373 92
From sales of public lands.....	1, 016, 506 60
From tax on circulation and deposits of national banks .....	7, 014, 971 44
From repayment of interest by Pacific Railway Companies.....	1, 707, 367 18
From sinking-fund for Pacific Railway Companies.....	786, 621 22
From customs fees, fines, penalties, &c.....	1, 148, 800 16
From fees—consular, letters patent, and lands.....	2, 337, 029 00
From proceeds of sales of government property .....	282, 616 50
From profits on coinage, &c.....	2, 792, 186 78
From revenues of the District of Columbia.....	1, 809, 469 70
From miscellaneous sources.....	4, 099, 603 88
<b>Total ordinary receipts.....</b>	<b>333, 526, 610 98</b>

The ordinary expenditures for the same period were—

For civil expenses.....	\$15, 693, 963 55
For foreign intercourse.....	1, 211, 490 58
For Indians.....	5, 945, 457 09
For pensions (including \$19,341,025.20 arrears of pensions).....	56, 777, 174 44
For the military establishment, including river and harbor improvements and arsenals.....	38, 116, 916 22
For the naval establishment, including vessels, machinery, and improvements at navy-yards.....	13, 536, 984 74
For miscellaneous expenditures, including public buildings, light-houses, and collecting the revenue.....	34, 535, 691 00
For expenditures on account of the District of Columbia.....	3, 272, 384 63
For interest on the public debt.....	95, 757, 575 11
For premium on bonds purchased.....	2, 795, 320 42
<b>Total ordinary expenditures.....</b>	<b>267, 642, 957 78</b>
Leaving a surplus revenue of.....	65, 883, 653 20
Which, with an amount drawn from the cash balance in Treasury of..	8, 084, 434 21
<b>Making.....</b>	<b>73, 968, 087 41</b>

**Was applied to the redemption—**

Of bonds for the sinking-fund.....	\$73, 652, 900 00
Of fractional currency.....	251, 717 41
Of the loan of 1858.....	40, 000 00
Of temporary loan.....	100 00
Of bounty-land scrip.....	25 00
Of compound-interest notes.....	16, 500 00
Of 7.30 notes of 1864-'5.....	2, 650 00
Of one and two year notes.....	3, 700 00
Of old demand notes.....	495 00
<b>Total .....</b>	<b>73, 968, 087 41</b>

The amount due the sinking-fund for this year was \$37,931,643.55. There was applied thereto the sum of \$73,904,617.41, being \$35,972,973.86 in excess of the actual requirements for the year.

The aggregate of the revenues from all sources during the fiscal year ended June 30, 1880, was \$333,526,610.98, an increase over the preceding year of \$59,699,426.52. The receipts thus far, of the current year, together with the estimated receipts for the remainder of the year, amount to \$350,000,000, which will be sufficient to meet the estimated expenditures of the year, and leave a surplus of \$90,000,000.

It is fortunate that this large surplus revenue occurs at a period when it may be directly applied to the payment of the public debt soon to be redeemable. No public duty has been more constantly cherished in the United States than the policy of paying the nation's debt as rapidly as possible.

The debt of the United States, less cash in the Treasury and exclusive of accruing interest, attained its maximum of \$2,756,431,571.43 in August, 1865, and has since that time been reduced to \$1,886,019,504.65. Of the principal of the debt, \$108,758,100 has been paid since March 1, 1877, effecting an annual saving of interest of \$6,107,593. The burden of interest has also been diminished by the sale of bonds bearing a low rate of interest and the application of the proceeds to the redemption of bonds bearing a higher rate. The annual saving thus secured since March 1, 1877, is \$14,290,453.50. Within a short period over six hundred millions of five and six per cent. bonds will become redeemable. This presents a very favorable opportunity not only to further reduce the principal of the debt, but also to reduce the rate of interest on that which will remain unpaid. I call the attention of Congress to the views expressed on this subject by the Secretary of the Treasury in his annual report, and recommend prompt legislation to enable the Treasury Department to complete the refunding of the debt which is about to mature.

The continuance of specie payments has not been interrupted or endangered since the date of resumption. It has contributed greatly to the revival of business and to our remarkable prosperity. The fears

that preceded and accompanied resumption have proved groundless. No considerable amount of United States notes have been presented for redemption, while very large sums of gold bullion, both domestic and imported, are taken to the mints and exchanged for coin or notes. The increase of coin and bullion in the United States since January 1, 1879, is estimated at \$227,399,428.

There are still in existence, uncanceled, \$346,681,016 of United States legal-tender notes. These notes were authorized as a war measure, made necessary by the exigencies of the conflict in which the United States was then engaged. The preservation of the nation's existence required, in the judgment of Congress, an issue of legal-tender paper money. That it served well the purpose for which it was created is not questioned, but the employment of the notes as paper money indefinitely, after the accomplishment of the object for which they were provided, was not contemplated by the framers of the law under which they were issued. These notes long since became—like any other pecuniary obligation of the government—a debt to be paid, and when paid to be canceled as mere evidence of an indebtedness no longer existing. I therefore repeat what was said in the annual message of last year, that the retirement from circulation of United States notes, with the capacity of legal tender in private contracts, is a step to be taken in our progress towards a safe and stable currency which should be accepted as the policy and duty of the government and the interest and security of the people.

At the time of the passage of the act now in force requiring the coinage of silver dollars, fixing their value and giving them legal-tender character, it was believed by many of the supporters of the measure that the silver dollar which it authorized would speedily become, under the operations of the law, of equivalent value to the gold dollar. There were other supporters of the bill who, while they doubted as to the probability of this result, nevertheless were willing to give the proposed experiment a fair trial, with a view to stop the coinage if experience should prove that the silver dollar authorized by the bill continued to be of less commercial value than the standard gold dollar.

The coinage of silver dollars, under the act referred to, began in March, 1878, and has been continued as required by the act. The average rate per month to the present time has been \$2,276,492. The total amount coined prior to the first of November last was \$72,847,750. Of this amount \$47,084,450 remain in the Treasury, and only \$25,763,291 are in the hands of the people. A constant effort has been made to keep this currency in circulation, and considerable expense has been necessarily incurred for this purpose, but its return to the Treasury is prompt and sure. Contrary to the confident anticipation of the friends of the measure at the time of its adoption, the value of the silver dollar containing 412½ grains of silver has not increased. During the year prior to the passage of the bill authorizing its coinage, the market value of

the silver which it contained was from 90 to 92 cents as compared with the standard gold dollar. During the last year the average market value of the silver dollar has been 88½ cents.

It is obvious that the legislation of the last Congress in regard to silver, so far as it was based on an anticipated rise in the value of silver as a result of that legislation, has failed to produce the effect then predicted. The longer the law remains in force, requiring as it does the coinage of a nominal dollar, which, in reality, is not a dollar, the greater becomes the danger that this country will be forced to accept a single metal as the sole legal standard of value in circulation, and this a standard of less value than it purports to be worth in the recognized money of the world.

The Constitution of the United States, sound financial principles, and our best interests all require that the country should have as its legal-tender money both gold and silver coin of an intrinsic value, as bullion, equivalent to that which, upon its face, it purports to possess. The Constitution, in express terms, recognizes both gold and silver as the only true legal-tender money. To banish either of these metals from our currency is to narrow and limit the circulating medium of exchange to the disparagement of important interests. The United States produces more silver than any other country, and is directly interested in maintaining it as one of the two precious metals which furnish the coinage of the world. It will, in my judgment, contribute to this result if Congress will repeal so much of existing legislation as requires the coinage of silver dollars containing only 412½ grains of silver, and in its stead will authorize the Secretary of the Treasury to coin silver dollars of equivalent value, as bullion, with gold dollars. This will defraud no man, and will be in accordance with familiar precedents. Congress, on several occasions, has altered the ratio of value between gold and silver, in order to establish it more nearly in accordance with the actual ratio of value between the two metals.

In financial legislation every measure in the direction of greater fidelity in the discharge of pecuniary obligations has been found by experience to diminish the rates of interest which debtors are required to pay, and to increase the facility with which money can be obtained for every legitimate purpose. Our own recent financial history shows how surely money becomes abundant whenever confidence in the exact performance of moneyed obligations is established.

The Secretary of War reports that the expenditures of the War Department for the fiscal year ended June 30, 1880, were \$39,924,773.03. The appropriations for this department, for the current fiscal year, amount to \$41,993,630.40.

With respect to the Army, the Secretary invites attention to the fact that its strength is limited by statute (section 1115 Revised Statutes) to not more than 30,000 enlisted men, but that provisos contained in appropriation bills have limited expenditures to the enlistment of but



25,000. It is believed the full legal strength is the least possible force at which the present organization can be maintained, having in view efficiency, discipline, and economy. While the enlistment of this force would add somewhat to the appropriation for pay of the Army, the saving made in other respects would be more than an equivalent for this additional outlay, and the efficiency of the Army would be largely increased.

The rapid extension of the railroad system west of the Mississippi River, and the great tide of settlers which has flowed in upon new territory, impose on the military an entire change of policy. The maintenance of small posts along wagon and stage routes of travel is no longer necessary. Permanent quarters at points selected, of a more substantial character than those heretofore constructed, will be required. Under existing laws permanent buildings cannot be erected without the sanction of Congress, and when sales of military sites and buildings have been authorized the moneys received have reverted to the Treasury and could only become available through a new appropriation. It is recommended that provision be made by a general statute for the sale of such abandoned military posts and buildings as are found to be unnecessary and for the application of the proceeds to the construction of other posts. While many of the present posts are of but slight value for military purposes, owing to the changed condition of the country, their occupation is continued at great expense and inconvenience, because they afford the only available shelter for troops.

The absence of a large number of officers of the line, in active duty, from their regiments is a serious detriment to the maintenance of the service. The constant demand for small detachments, each of which should be commanded by a commissioned officer, and the various details of officers for necessary service away from their commands, occasions a scarcity in the number required for company duties. With a view to lessening this drain to some extent it is recommended that the law authorizing the detail of officers from the active list, as professors of tactics and military science at certain colleges and universities, be so amended as to provide that all such details be made from the retired list of the Army.

Attention is asked to the necessity of providing by legislation for organizing, arming, and disciplining the *active* militia of the country, and liberal appropriations are recommended in this behalf. The reports of the Adjutant-General of the Army and the Chief of Ordnance touching this subject fully set forth its importance.

The report of the officer in charge of education in the Army shows that there are seventy-eight schools now in operation in the Army, with an aggregate attendance of 2,305 enlisted men and children. The Secretary recommends the enlistment of one hundred and fifty schoolmasters, with the rank and pay of commissary sergeants. An appropriation is needed to supply the judge-advocates of the Army with suitable



libraries, and the Secretary recommends that the corps of judge-advocates be placed upon the same footing, as to promotion, with the other staff corps of the Army. Under existing laws, the Bureau of Military Justice consists of one officer, the Judge-Advocate-General, and the corps of judge-advocates of eight officers of equal rank (majors), with a provision that the limit of the corps shall remain at four when reduced by casualty or resignation to that number. The consolidation of the Bureau of Military Justice and the corps of judge-advocates, upon the same basis with the other staff corps of the Army, would remove an unjust discrimination against deserving officers, and subserve the best interests of the service.

Especial attention is asked to the report of the Chief of Engineers upon the condition of our national defenses. From a personal inspection of many of the fortifications referred to, the Secretary is able to emphasize the recommendations made, and to state that their incomplete and defenseless condition is discreditable to the country. While other nations have been increasing their means for carrying on offensive warfare and attacking maritime cities, we have been dormant in preparation for defense; nothing of importance has been done towards strengthening and finishing our casemated works since our late civil war, during which the great guns of modern warfare and the heavy armor of modern fortifications and ships came into use among the nations; and our earth-works, left by a sudden failure of appropriations some years since in all stages of incompleteness, are now being rapidly destroyed by the elements.

The two great rivers of the North American Continent, the Mississippi and the Columbia, have their navigable waters wholly within the limits of the United States, and are of vast importance to our internal and foreign commerce. The permanency of the important work on the South Pass of the Mississippi River seems now to be assured. There has been no failure whatever in the maintenance of the maximum channel during the six months ended August 9, last. This experiment has opened a broad, deep highway to the ocean, and is an improvement, upon the permanent success of which congratulations may be exchanged among people abroad and at home, and especially among the communities of the Mississippi Valley, whose commercial exchanges float in an unobstructed channel safely to and from the sea.

A comprehensive improvement of the Mississippi and its tributaries is a matter of transcendent importance. These great water-ways comprise a system of inland transportation spread like net-work over a large portion of the United States, and navigable to the extent of many thousands of miles. Producers and consumers alike have a common interest in such unequaled facilities for cheap transportation. Geographically, commercially, and politically, they are the strongest tie between the various sections of the country. These channels of communication and interchange are the property of the nation. Its jurisdiction is paramount over their waters, and the plainest principles of

public interest require their intelligent and careful supervision, with a view to their protection, improvement, and the enhancement of their usefulness.

The channel of the Columbia River, for a distance of about one hundred miles from its mouth, is obstructed by a succession of bars, which occasion serious delays in navigation, and heavy expense for lighterage and towage. A depth of at least twenty feet at low tide should be secured and maintained, to meet the requirements of the extensive and growing inland and ocean commerce it subserves. The most urgent need, however, for this great water-way is a permanent improvement of the channel at the mouth of the river.

From Columbia River to San Francisco, a distance of over six hundred miles, there is no harbor on our Pacific coast which can be approached during stormy weather. An appropriation of \$150,000 was made by the Forty-fifth Congress for the commencement of a breakwater and harbor of refuge, to be located at some point between the Straits of Fuca and San Francisco, at which the necessities of commerce, local and general, will be best accommodated. The amount appropriated is thought to be quite inadequate for the purpose intended. The cost of the work, when finished, will be very great, owing to the want of natural advantages for a site at any point on the coast between the designated limits, and it has not been thought to be advisable to undertake the work without a larger appropriation. I commend the matter to the attention of Congress.

The completion of the new building for the War Department is urgently needed, and the estimates for continuing its construction are especially recommended.

The collections of books, specimens, and records constituting the Army Medical Museum and Library are of national importance. The library now contains about fifty-one thousand five hundred (51,500) volumes and fifty-seven thousand (57,000) pamphlets relating to medicine, surgery, and allied topics. The contents of the Army Medical Museum consist of twenty-two thousand (22,000) specimens, and are unique in the completeness with which both military surgery and the diseases of armies are illustrated. Their destruction would be an irreparable loss, not only to the United States, but to the world. There are filed in the record and pension division over sixteen thousand (16,000) bound volumes of hospital records, together with a great quantity of papers, embracing the original records of the hospitals of our armies during the civil war. Aside from their historical value, these records are daily searched for evidence needed in the settlement of large numbers of pension and other claims, for the protection of the government against attempted frauds, as well as for the benefit of honest claimants. These valuable collections are now in a building which is peculiarly exposed to the danger of destruction by fire. It is therefore earnestly recommended that an appropriation be made for a new fire-proof building,

adequate for the present needs and reasonable future expansion of these valuable collections. Such a building should be absolutely fire-proof; no expenditure for mere architectural display is required. It is believed that a suitable structure can be erected at a cost not to exceed two hundred and fifty thousand dollars (\$250,000).

I commend to the attention of Congress the great services of the commander and chief of our armies during the war for the Union, whose wise, firm, and patriotic conduct did so much to bring that momentous conflict to a close. The legislation of the United States contains many precedents for the recognition of distinguished military merit, authorizing rank and emoluments to be conferred for eminent services to the country. An act of Congress authorizing the appointment of a Captain-General of the Army, with suitable provisions relating to compensation, retirement, and other details, would, in my judgment, be altogether fitting and proper, and would be warmly approved by the country.

The report of the Secretary of the Navy exhibits the successful and satisfactory management of that department during the last fiscal year. The total expenditures for the year were \$12,916,639.45, leaving unexpended, at the close of the year, \$2,141,682.23 of the amount of available appropriations. The appropriations for the present fiscal year ending June 30, 1881, are \$15,095,061.45; and the total estimates for the next fiscal year ending June 30, 1882, are \$15,953,751.61. The amount drawn by warrant from July 1, 1880, to November 1, 1880, is \$5,041,570.45.

The recommendation of the Secretary of the Navy that provision be made for the establishment of some form of civil government for the people of Alaska is approved. At present there is no protection of persons or property in that Territory, except such as is afforded by the officers of the United States ship Jamestown. The vessel was dispatched to Sitka, because of the fear that, without the immediate presence of the national authority, there was impending danger of anarchy. The steps taken to restore order have been accepted in good faith by both white and Indian inhabitants, and the necessity for this method of restraint does not, in my opinion, now exist. If, however, the Jamestown should be withdrawn, leaving the people, as at present, without the ordinary, judicial, and administrative authority of organized local government, serious consequences might ensue.

The laws provide only for the collection of revenue, the protection of public property, and the transmission of the mails. The problem is to supply a local rule for a population so scattered and so peculiar in its origin and condition. The natives are reported to be teachable and self-supporting, and, if properly instructed, doubtless would advance rapidly in civilization, and a new factor of prosperity would be added to the national life. I therefore recommend the requisite legislation upon this subject.

The Secretary of the Navy has taken steps towards the establishment of naval coaling-stations at the Isthmus of Panama, to meet the re-

quirements of our commercial relations with Central and South America, which are rapidly growing in importance. Locations eminently suitable, both as regards our naval purposes and the uses of commerce, have been selected, one on the east side of the isthmus, at Chiriqui Lagoon, in the Caribbean Sea, and the other on the Pacific coast, at the Bay of Golfito. The only safe harbors, sufficiently commodious, on the isthmus, are at these points, and the distance between them is less than one hundred miles. The report of the Secretary of the Navy concludes with valuable suggestions with respect to the building up of our merchant-marine service, which deserve the favorable consideration of Congress.

The report of the Postmaster-General exhibits the continual growth and the high state of efficiency of the postal service. The operations of no department of the government, perhaps, represent with greater exactness the increase in the population and the business of the country. In 1860 the postal receipts were \$8,518,067.40; in 1880 the receipts were \$33,315,479.34. All the inhabitants of the country are directly and personally interested in having proper mail facilities, and naturally watch the Post-Office very closely. This careful oversight on the part of the people has proved a constant stimulus to improvement. During the past year there was an increase of 2,134 post-offices, and the mail routes were extended 27,177 miles, making an additional annual transportation of 10,804,191 miles. The revenues of the postal service for the ensuing year are estimated at \$38,845,174.10, and the expenditures at \$42,475,932, leaving a deficiency to be appropriated out of the Treasury of \$3,630,757.90.

The Universal Postal Union has received the accession of almost all the countries and colonies of the world maintaining organized postal services, and it is confidently expected that all the other countries and colonies now outside the Union will soon unite therewith, thus realizing the grand idea and aim of the founders of the Union of forming, for purposes of international mail communication, a single postal territory, embracing the world, with complete uniformity of postal charges and conditions of international exchange for all descriptions of correspondence. To enable the United States to do its full share of this great work additional legislation is asked by the Postmaster-General, to whose recommendations especial attention is called.

The suggestion of the Postmaster-General that it would be wise to encourage, by appropriate legislation, the establishment of American lines of steamers by our own citizens, to carry the mails between our own ports and those of Mexico, Central America, South America, and of transpacific countries, is commended to the serious consideration of Congress.

The attention of Congress is also invited to the suggestions of the Postmaster-General in regard to postal-savings.

The necessity for additional provision to aid in the transaction of the business of the Federal courts becomes each year more apparent. The dockets of the Supreme Court and of the circuit courts, in the greater

number of the circuits, are encumbered with the constant accession of cases. In the former court, and in many instances in the circuit courts, years intervene before it is practicable to bring cases to a hearing.

The Attorney-General recommends the establishment of an intermediate court of errors and appeals. It is recommended that the number of judges of the circuit court in each circuit, with the exception of the second circuit, should be increased by the addition of another judge; in the second circuit, that two should be added; and that an intermediate appellate court should be formed in each circuit, to consist of the circuit judges and the circuit justice, and that in the event of the absence of either of these judges the place of the absent judge should be supplied by the judge of one of the district courts in the circuit. Such an appellate court could be safely invested with large jurisdiction, and its decisions would satisfy suitors in many cases where appeals would still be allowed to the Supreme Court. The expense incurred for this intermediate court will require a very moderate increase of the appropriations for the expenses of the Department of Justice. This recommendation is commended to the careful consideration of Congress.

It is evident that a delay of justice, in many instances oppressive and disastrous to suitors, now necessarily occurs in the Federal courts, which will in this way be remedied.

The report of the Secretary of the Interior presents an elaborate account of the operations of that department during the past year. It gives me great pleasure to say that our Indian affairs appear to be in a more hopeful condition now than ever before. The Indians have made gratifying progress in agriculture, herding, and mechanical pursuits. Many, who were a few years ago in hostile conflict with the government, are quietly settling down on farms where they hope to make their permanent homes, building houses, and engaging in the occupations of civilized life. The introduction of the freighting business among them has been remarkably fruitful of good results, in giving many of them congenial and remunerative employment, and in stimulating their ambition to earn their own support. Their honesty, fidelity, and efficiency as carriers are highly praised. The organization of a police force of Indians has been equally successful in maintaining law and order upon the reservations, and in exercising a wholesome moral influence among the Indians themselves. I concur with the Secretary of the Interior in the recommendation that the pay of this force be increased as an inducement to the best class of young men to enter it.

Much care and attention has been devoted to the enlargement of educational facilities for the Indians. The means available for this important object have been very inadequate. A few additional boarding-schools at Indian agencies have been established and the erection of buildings has been begun for several more, but an increase of the appropriations for this interesting undertaking is greatly needed to accommodate the large number of Indian children of school age. The number



offered by their parents from all parts of the country for education in the government schools is much larger than can be accommodated with the means at present available for that purpose. The number of Indian pupils at the Normal School at Hampton, Virginia, under the direction of General Armstrong, has been considerably increased, and their progress is highly encouraging. The Indian school established by the Interior Department, in 1879, at Carlisle, Pennsylvania, under the direction of Captain Pratt, has been equally successful. It has now nearly two hundred pupils of both sexes, representing a great variety of the tribes east of the Rocky Mountains. The pupils in both these institutions receive not only an elementary English education, but are also instructed in housework, agriculture, and useful mechanical pursuits. A similar school was established this year at Forest Grove, Oregon, for the education of Indian youth on the Pacific coast. In addition to this, thirty-six Indian boys and girls were selected from the Eastern Cherokees and placed in boarding-schools in North Carolina, where they are to receive an elementary English education and training in industrial pursuits. The interest shown by Indian parents, even among the so-called wild tribes, in the education of their children is very gratifying, and gives promise that the results accomplished by the efforts now making will be of lasting benefit.

The expenses of Indian education have so far been drawn from the permanent civilization fund at the disposal of the Department of the Interior; but the fund is now so much reduced that the continuance of this beneficial work will in the future depend on specific appropriations by Congress for the purpose; and I venture to express the hope that Congress will not permit institutions so fruitful of good results to perish for want of means for their support. On the contrary, an increase of the number of such schools appears to me highly advisable.

The past year has been unusually free from disturbances among the Indian tribes. An agreement has been made with the Utes, by which they surrender their large reservation in Colorado in consideration of an annuity to be paid to them, and agree to settle in severalty on certain lands designated for that purpose, as farmers, holding individual title to their land in fee-simple, inalienable for a certain period. In this way a costly Indian war has been avoided, which, at one time, seemed imminent, and, for the first time in the history of the country, an Indian nation has given up its tribal existence to be settled in severalty, and to live as individuals under the common protection of the laws of the country.

The conduct of the Indians throughout the country during the past year, with but few noteworthy exceptions, has been orderly and peaceful. The guerilla warfare carried on for two years by Victoria and his band of Southern Apaches has virtually come to an end by the death of that chief and most of his followers, on Mexican soil. The disturbances caused on our northern frontier by Sitting Bull and his men, who had

taken refuge in the British dominions, are also likely to cease. A large majority of his followers have surrendered to our military forces, and the remainder are apparently in progress of disintegration.

I concur with the Secretary of the Interior in expressing the earnest hope that Congress will at this session take favorable action on the bill providing for the allotment of lands on the different reservations in severalty to the Indians, with patents conferring fee-simple title inalienable for a certain period, and the eventual disposition of the residue of the reservations, for general settlement, with the consent and for the benefit of the Indians, placing the latter under the equal protection of the laws of the country. This measure, together with a vigorous prosecution of our educational efforts, will work the most important and effective advance toward the solution of the Indian problem, in preparing for the gradual merging of our Indian population in the great body of American citizenship.

A large increase is reported in the disposal of public lands for settlement during the past year, which marks the prosperous growth of our agricultural industry, and a vigorous movement of population toward our unoccupied lands. As this movement proceeds, the codification of our land laws, as well as proper legislation to regulate the disposition of public lands, become of more pressing necessity, and I therefore invite the consideration of Congress to the report and the accompanying draft of a bill, made by the Public Lands Commission, which were communicated by me to Congress at the last session. Early action upon this important subject is highly desirable.

The attention of Congress is again asked to the wasteful depredations committed on our public timber-lands, and the rapid and indiscriminate destruction of our forests. The urgent necessity for legislation to this end is now generally recognized. In view of the lawless character of the depredations committed, and the disastrous consequences which will inevitably follow their continuance, legislation has again and again been recommended to arrest the evil, and to preserve for the people of our Western States and Territories the timber needed for domestic and other essential uses.

The report of the Director of the Geological Survey is a document of unusual interest. The consolidation of the various geological and geographical surveys and exploring enterprises, each of which has heretofore operated upon an independent plan, without concert, cannot fail to be of great benefit to all those industries of the country which depend upon the development of our mineral resources. The labors of the scientific men, of recognized merit, who compose the corps of the Geological Survey, during the first season of their field operations and inquiries, appear to have been very comprehensive, and will soon be communicated to Congress in a number of volumes. The Director of the Survey recommends that the investigations carried on by his bureau, which so far have been confined to the so-called public-land States and Terri-

tories, be extended over the entire country, and that the necessary appropriation be made for this purpose. This would be particularly beneficial to the iron, coal, and other mining interests of the Mississippi Valley, and of the Eastern and Southern States. The subject is commended to the careful consideration of Congress.

The Secretary of the Interior asks attention to the want of room in the public buildings of the capital, now existing and in progress of construction, for the accommodation of the clerical force employed and of the public records. Necessity has compelled the renting of private buildings in different parts of the city for the location of public offices, for which a large amount of rent is annually paid, while the separation of offices belonging to the same department impedes the transaction of current business. The Secretary suggests that the blocks surrounding Lafayette Square on the east, north, and west be purchased as the sites for new edifices for the accommodation of the government offices, leaving the square itself intact, and that, if such buildings were constructed upon a harmonious plan of architecture they would add much to the beauty of the national capital, and would, together with the Treasury and the new State, Navy, and War Department building, form one of the most imposing groups of public edifices in the world.

The Commissioner of Agriculture expresses the confident belief that his efforts in behalf of the production of our own sugar and tea have been encouragingly rewarded. The importance of the results attained have attracted marked attention at home, and have received the special consideration of foreign nations. The successful cultivation of our own tea and the manufacture of our own sugar would make a difference of many millions of dollars annually in the wealth of the nation.

The report of the Commissioner asks attention particularly to the continued prevalence of an infectious and contagious cattle disease known and dreaded in Europe and Asia as cattle-plague, or pleuro pneumonia. A mild type of this disease, in certain sections of our country, is the occasion of great loss to our farmers, and of serious disturbance to our trade with Great Britain, which furnishes a market for most of our live stock and dressed meats. The value of neat-cattle exported from the United States for the eight months ended August 31, 1880, was more than twelve million dollars, and nearly double the value for the same period in 1879, an unexampled increase of export trade. Your early attention is solicited to this important matter.

The Commissioner of Education reports a continued increase of public interest in educational affairs, and that the public schools generally throughout the country are well sustained. Industrial training is attracting deserved attention, and colleges for instruction, theoretical and practical, in agriculture and mechanic arts, including the government schools recently established for the instruction of Indian youth, are gaining steadily in public estimation. The Commissioner asks special attention to the depredations committed on the lands reserved for the



future support of public instruction, and to the very great need of help from the nation for schools in the Territories and in the Southern States. The recommendation heretofore made is repeated and urged that an educational fund be set apart from the net proceeds of the sales of the public lands annually, the income of which and the remainder of the net annual proceeds, to be distributed on some satisfactory plan to the States and the Territories and the District of Columbia.

The success of the public schools of the District of Columbia, and the progress made, under the intelligent direction of the board of education and the superintendent, in supplying the educational requirements of the District with thoroughly trained and efficient teachers, is very gratifying. The acts of Congress, from time to time, donating public lands to the several States and Territories in aid of educational interests have proved to be wise measures of public policy, resulting in great and lasting benefit. It would seem to be a matter of simple justice to extend the benefits of this legislation, the wisdom of which has been so fully vindicated by experience, to the District of Columbia.

I again commend the general interests of the District of Columbia to the favorable consideration of Congress. The affairs of the District, as shown by the report of the Commissioners, are in a very satisfactory condition.

In my annual messages heretofore, and in my special message of December 19, 1879, I have urged upon the attention of Congress the necessity of reclaiming the marshes of the Potomac adjacent to the capital, and I am constrained by its importance to advert again to the subject. These flats embrace an area of several hundred acres. They are an impediment to the drainage of the city and seriously impair its health. It is believed that, with this substantial improvement of its river front, the capital would be, in all respects, one of the most attractive cities in the world. Aside from its permanent population this city is necessarily the place of residence of persons from every section of the country engaged in the public service. Many others reside here temporarily for the transaction of business with the government.

It should not be forgotten that the land acquired will probably be worth the cost of reclaiming it, and that the navigation of the river will be greatly improved. I therefore again invite the attention of Congress to the importance of prompt provision for this much-needed and too-long-delayed improvement.

The water supply of the city is inadequate. In addition to the ordinary use throughout the city, the consumption by government is necessarily very great in the navy-yard, arsenal, and the various departments, and a large quantity is required for the proper preservation of the numerous parks and the cleansing of sewers. I recommend that this subject receive the early attention of Congress, and that in making provision for an increased supply, such means be adopted as will have in view the future growth of the city. Temporary expedients for such

a purpose cannot but be wastful of money, and therefore unwise. A more ample reservoir, with corresponding facilities for keeping it filled, should, in my judgment, be constructed. I commend again to the attention of Congress the subject of the removal from their present location of the depots of the several railroads entering the city ; and I renew the recommendations of my former messages in behalf of the erection of a building for the Congressional Library ; the completion of the Washington Monument ; and of liberal appropriations in support of the benevolent, reformatory, and penal institutions of the District.

**RUTHERFORD B. HAYES.**

**EXECUTIVE MANSION,**  
*December 6, 1880.*

# REPORT

## OF

# THE SECRETARY OF THE TREASURY.

TREASURY DEPARTMENT,  
*Washington, D. C., December 6, 1880.*

SIR: I have the honor to submit the following annual report:

The ordinary revenues, from all sources, for the fiscal year ended June 30, 1880, were—

From customs .....	\$186, 522, 064 60
From internal revenue .....	124, 009, 373 92
From sales of public lands.....	1, 016, 506 60
From tax on circulation and deposits of national banks	7, 014, 971 44
From repayment of interest by Pacific Railway Com- panies.....	1, 707, 367 18
From sinking-fund for Pacific Railway Companies ..	786, 621 22
From customs fees, fines, penalties, &c .....	1, 148, 800 16
From fees—consular, letters-patent, and lands.....	2, 337, 029 00
From proceeds of sales of Government property....	282, 616 50
From profits on coinage, &c.....	2, 792, 186 78
From revenues of the District of Columbia.....	1, 809, 469 70
From miscellaneous sources.....	4, 099, 603 88

Total ordinary receipts .....	333, 526, 610 98
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The ordinary expenditures for the same period were—

For civil expenses.....	\$15, 693, 963 55
For foreign intercourse .....	1, 211, 490 58
For Indians.....	5, 945, 457 09
For pensions, including \$19,341,025 20 arrears of pen- sions.....	56, 777, 174 44
For the military establishment, including river and harbor improvements and arsenals.....	38, 116, 916 22
For the naval establishment, including vessels, ma- chinery, and improvements at navy-yards .....	13, 536, 984 74

For miscellaneous expenditures, including public buildings, light-houses, and collecting the revenue.	\$34,535,691 00
For expenditures on account of the District of Columbia .....	3,272,384 63
For interest on the public debt.....	95,757,575 11
For premium on bonds purchased .....	2,795,320 42
<b>Total ordinary expenditures.....</b>	<b>267,642,957 78</b>
<b>Leaving a surplus revenue of.....</b>	<b>\$65,883,653 20</b>
Which, with an amount drawn from cash balance in Treasury, of.....	8,084,434 21
<b>Making .....</b>	<b>73,968,087 41</b>
<b>Was applied to the redemption—</b>	
Of bonds for the sinking-fund.....	73,652,900 00
Of fractional currency for the sinking-fund.....	251,717 41
Of the loan of 1858.....	40,000 00
Of temporary loan .....	100 00
Of bounty-land scrip .....	25 00
Of compound-interest notes.....	16,500 00
Of 7.30 notes of 1864-'5.....	2,650 00
Of one and two-year notes .....	3,700 00
Of old demand notes .....	495 00
	<b>73,968,087 41</b>

The amount due the sinking-fund for this year was \$37,931,643 55. There was applied thereto, from the redemption of bonds and fractional currency, as shown in the above statement, the sum of \$73,904,617 41, an excess of \$35,972,973 86 over the amount actually required for the year.

The requirements of the sinking-fund law have been substantially observed, and the principal of the public debt, less cash in the Treasury and exclusive of accruing interest, has been reduced from \$2,756,431,571 43, its highest point, which it reached on August 31, 1865, to \$1,890,025,740 89, on November 1, 1880—a reduction of \$866,405,830 54.

Compared with the previous fiscal year, the receipts for 1880 have increased \$62,629,438 23, in the following items: In customs revenue, \$49,272,016 90; in internal revenue, \$10,447,763 34; in sales of public lands, \$91,725 54; in tax on circulation and deposits of national banks, \$267,471 12; in proceeds of sales of Government property, \$101,487 69;

in consular fees, \$142,551 32; in custom-house fees, \$92,403 63; in steamboat fees, \$12,063 39; in marine-hospital tax, \$27,183 29; in interest on Indian trust-funds, \$640,901 59; in sales of Indian lands, \$272,883 54; in deposits by individuals for surveying public lands, \$380,062 33; and in miscellaneous items, \$880,924 55. There was a decrease of \$2,930,011 71, as follows: In premium on loans, \$1,496,943 25; in repayment of interest by Pacific Railway Companies, \$999,833 85; in profits on coinage, \$132,751 89; in premium on sales of coin, \$8,104 38; in customs fines, penalties, and forfeitures, \$39,726 78; in customs-emolument fees, \$4,748 35; and in unenumerated items, \$247,903 21—making a net increase in the receipts, from all sources, for the year, of \$59,699,426 52.

The expenditures show an increase over the previous year of \$25,190,360 48, as follows: In the Interior Department, \$22,395,040 06; (Indians, \$739,348 01; and pensions, \$21,655,692 05;) in premium on bonds purchased, \$2,795,320 42. There was a decrease of \$24,495,286 23, as follows: In the War Department, \$2,308,744 51; in the Navy Department, \$1,588,142 10; in the interest on public debt, \$9,570,373 89; and in the civil and miscellaneous, \$11,028,025 73—making a net increase in the expenditures, for the year, of \$695,074 25.

## FISCAL YEAR 1881.

For the present fiscal year the revenue, actual and estimated, is as follows:

Source.	For the quarter ended Sept. 30, 1880.	For the remain- ing three quar- ters of the year.
	Actual.	Estimated.
From customs.....	\$56,395,143 44	\$138,604,856 56
From internal revenue .....	32,496,422 38	97,503,577 62
From sales of public lands.....	434,590 66	765,409 34
From tax on circulation and deposits of na- tional banks .....	3,933,346 37	3,190,653 63
From repayment of interest by Pacific Rail- way Companies .....	911,402 76	1,588,597 24
From customs fees, fines, penalties, &c.....	351,870 95	898,129 05
From fees—consular, letters-patent, and lands.	542,064 23	1,907,935 77
From proceeds of sales of Government prop- erty .....	56,311 23	193,688 77
From profits on coinage, &c.....	985,882 46	1,914,117 54
From revenues of the District of Columbia...	265,872 65	1,510,127 35
From miscellaneous sources.....	2,216,332 79	4,033,667 21
Total receipts.....	97,889,239 92	252,110,760 08

The expenditures for the same period, actual and estimated, are—

Source.	For the quarter ended Sept. 30, 1880.	For the remain- ing three quar- ters of the year.
	Actual.	Estimated.
For civil and miscellaneous expenses, includ- ing public buildings, light-houses, and col- lecting the revenue .....	\$16,363,841 35	\$36,636,158 65
For Indians .....	2,800,661 99	3,849,338 01
For pensions .....	13,604,079 14	36,395,920 86
For military establishment, including forti- fications, river and harbor improvements, and arsenals .....	12,640,602 13	28,359,397 87
For naval establishment, including vessels and machinery, and improvements at navy- yards .....	5,085,571 98	9,914,428 02
For expenditures on account of the District of Columbia .....	1,298,944 61	2,051,055 39
For interest on the public debt .....	25,224,830 58	65,775,169 42
Total ordinary expenditures .....	77,018,531 78	182,981,468 22

Total receipts, actual and estimated ..... \$350,000,000 00

Total expenditures, actual and estimated ..... 260,000,000 00

90,000,000 00

Estimated amount due the sinking-fund ..... 39,801,884 48

Leaving a balance of ..... 50,198,115 52

The act of February 25, 1862, amended by the act of July 14, 1870, providing for a sinking-fund for the payment of the public debt, is in conformity with the policy which has prevailed since the adoption of the Constitution, of regarding a public debt as a temporary burden, to be paid off as rapidly as the public interests will allow. The provisions of these acts have been substantially complied with. They were executed literally, until the panic of 1873, by largely decreasing the revenues of the Government, rendered it impossible to meet their requirements. The deficiency on the sinking-fund account is as follows:

In the fiscal year 1874 .....	\$16,305,421 96
In the fiscal year 1875 .....	5,996,039 62
In the fiscal year 1876 .....	1,143,769 82
In the fiscal year 1877 .....	9,225,146 63
In the fiscal year 1878 .....	18,415,557 31
In the fiscal year 1879 .....	36,231,632 87
Total amount due on sinking-fund .....	87,317,568 21



Less the payment made during the past fiscal year in  
excess of the amount required, as above set forth. \$35,972,973 86

Leaving a balance still due on account of the sinking-  
fund, of..... 51,344,594 35

Or nearly the same amount as the balance of estimated receipts over  
the estimated expenditures, as shown above. Thus it is probable that  
there can be applied to the purchase of bonds for the sinking-fund  
during the present fiscal year an amount sufficient to cover the whole  
deficiency now existing on the account of that fund, thus making good  
the whole amount of the sinking-fund as required by law.

### FISCAL YEAR 1882.

The revenues of the fiscal year ending June 30, 1882, estimated  
upon the basis of existing laws, will be—

From customs .....	\$195,000,000 00
From internal revenue.....	130,000,000 00
From sales of public lands.....	1,000,000 00
From tax on circulation and deposits of national banks.	7,124,000 00
From repayment of interest by Pacific Railway Com- panies.....	2,500,000 00
From sinking-fund for Pacific Railway Companies ..	1,500,000 00
From customs fees, fines, penalties, &c.....	1,150,000 00
From fees—consular, letters-patent, and lands.....	2,350,000 00
From proceeds of sales of Government property....	200,000 00
From profits on coinage, &c.....	2,800,000 00
From revenues of the District of Columbia.....	1,676,000 00
From miscellaneous sources.....	4,700,000 00
Total ordinary receipts .....	<u>350,000,000 00</u>

The estimates of expenditures, for the same period, received from  
the several Executive Departments, are as follows:

Legislative .....	\$3,038,643 26
Executive .....	14,536,404 23
Judicial .....	399,300 00
Foreign intercourse .....	1,257,035 00
Military establishment .....	30,240,790 04
Naval establishment.....	15,022,331 01
Indian affairs .....	4,858,866 80
Pensions .....	50,000,000 00

## Public works:

Treasury Department .....	\$3, 583, 022 56
War Department .....	9, 896, 050 00
Navy Department.....	931, 421 05
Interior Department .....	605, 042 07
Post-Office Department .....	36, 000 00
Department of Agriculture.....	8, 000 00
Postal service.....	3, 630, 757 90
Miscellaneous.....	16, 794, 646 91
District of Columbia.....	3, 352, 000 00

## Permanent annual appropriations:

Interest on the public debt .....	88, 877, 410 00
Sinking-fund .....	41, 639, 840 20
Refunding—customs, internal revenue, lands, &c .	5, 832, 900 00
Collecting revenue from customs .....	5, 500, 000 00
Miscellaneous.....	1, 514, 261 25

Total estimated expenditures, including sinking-fund.....

301, 554, 722 28

Or, an estimated surplus of ..... \$48, 445, 277 72

Excluding the sinking-fund, the estimated expenditures will be \$259,914,882 08, showing a surplus of \$90,085,117 92.

The Secretary respectfully renews his recommendation of last year that, with a view to promote economy in the public service, a permanent organization of an appropriation committee for each House be established, who shall have leave to sit during the recess of Congress, with power to send for persons and papers, and to examine all expenditures of the Government; that rules be adopted by the respective Houses limiting appropriation bills to items of appropriation and excluding legislative provisions; that all appropriations, except for the interest on the public debt, be limited to a period not exceeding two years, and that the expenditure of appropriations be strictly confined to the period of time for which they were appropriated.

## REDUCTION OF TAXES.

It appears from the foregoing statements that the surplus revenue, actual and estimated, for the fiscal years 1880, 1881, and 1882, after providing for the sinking-fund for each year, is as follows:

For the year ended June 30, 1880 .....	\$27, 952, 009 65
For the year ending June 30, 1881.....	50, 198, 115 52
For the year ending June 30, 1882.....	48, 445, 277 72

This naturally presents to Congress the question whether the surplus revenue accruing after the present year should be applied to the further reduction of the public debt, or whether taxes now imposed should be repealed or modified to the extent of such surplus. The many and sudden changes that have heretofore occurred in the amounts realized from our system of taxation are a sufficient warning that revenue should not be surrendered unless it satisfactorily appears that the surplus is permanent, and not merely temporary. If the taxes imposed by existing laws are not oppressive in their nature, it is perhaps better to bear with them than to endanger the ability of the Government to meet the current appropriations and the sinking-fund. A large portion of the surplus of revenue over expenditures is caused by the reduction of the rate of interest and the payment of the principal of the public debt. The reduction of annual interest caused by refunding since March 1, 1877, is \$14,290,453 50, and the saving of annual interest resulting from the payment of \$109,489,850 of the principal of the public debt, since that date, is \$6,144,737 50. The interest is likely to be still further reduced during the next year in an amount estimated at \$12,101,429 50, by the refunding of bonds as hereinafter proposed. To the extent of this annual saving, amounting to \$32,539,620 50, the public expenditures will be permanently diminished. The large increase of revenue from customs on a few articles during the last year may be somewhat abnormal, and the estimates based upon it may not be realized. It is a question for Congress to determine whether any material reduction should be made at a time when the whole surplus revenue may be with great advantage applied directly to the payment of accruing debt, and when such surplus is an important element in aid of refunding. If it should be determined by Congress to reduce taxes, it is respectfully recommended that all the taxes imposed by the internal-revenue law other than those on bank-circulation and on spirits, tobacco, and fermented liquors be repealed. The tax on the circulation of national banks is levied partly in the nature of a moderate charge for a franchise conferred by the Government, and partly to furnish means to pay the expense of printing and issuing national-bank notes. It is easily collected by the Treasurer of the United States, and is a just and proper tax, whether regarded as a charge for the franchise or as a means of reimbursing the Government the cost of printing the notes. The tax on State banks is of the gravest importance, not for purposes of revenue, but as a check upon the renewal of a system of local State paper money which, as it would be issued under varying State laws, would neces-

sarily differ as to conditions, terms, and security, and could not, from its diversity, be guarded against counterfeiting, and would, at best, have but limited circulation.

#### REFUNDING.

A large portion of the public debt becomes payable or redeemable on or before July 1, next, as follows:

Title of loan.	Rate.	Payable.	Redeemable.	Amount.
Loan of February, 1861 . . .	6 per cent .	Dec. 31, 1880	.....	\$13,414,000
Oregon-War debt . . . . .	6 per cent .	July 1, 1881	.....	711,800
Loan July and Aug., 1861.	6 per cent .	.....	June 30, 1881	145,786,500
Loan of 1863, (1881's) . . . .	6 per cent .	.....	June 30, 1881	57,787,250
Funded Loan of 1881 . . . .	5 per cent .	.....	May 1, 1881	469,651,050
Outstanding Nov. 1, 1880..	.....	.....	.....	687,350,600

The bonds maturing December 31, 1880, will be paid from accruing revenue. The surplus revenue accruing prior to July 1, 1881, estimated at about fifty million dollars, (\$50,000,000,) will be applied under existing law to the purchase or payment of the bonds above described, thus leaving the sum of \$637,350,600 to be provided for. The third section of the act approved July 14, 1870, for refunding the national debt, under which the five per cent. bonds, maturing May 1, 1880, are redeemable, requires the Secretary of the Treasury to give public notice three months in advance of their payment. To enable the Department to avail itself of the option of redeeming these bonds at their maturity, the necessary legislation for that purpose should be passed prior to February 1, next. The five and six per cent. bonds are not, by their terms, payable at a specific date, but they are redeemable at the pleasure of the United States after the dates above named. They bear a much higher rate of interest than the rate at which new bonds can be sold. Any delay in providing for their redemption will compel the continued payment of high rates of interest; it will make necessary the issue of a new series of coupons to the holders of coupon bonds, and may postpone to a less favorable period the completion of the operations of refunding. Under existing law, there is still available for this purpose four per cent. bonds authorized by the acts of July 14, 1870, and January 20, 1871, to the amount of \$104,652,200. These could now be sold at a large premium, and, in the absence of legislation, it would be the duty of the Secretary, when any bonds became redeemable, to sell the four per cents and apply the proceeds to the

redemption of such bonds; but the amount of four per cents authorized is inadequate to the purpose stated. It is therefore advisable, by new and comprehensive legislation, to authorize the sale of other securities sufficient to redeem the whole sum soon to be redeemable. The terms and conditions of the securities to be authorized for this purpose have received the careful attention of this Department. Hitherto the policy has been to sell bonds bearing as low a rate of interest as possible, running a number of years; but, in view of the requirements of the sinking-fund, it is believed that a large portion of the public debt to be redeemed can be provided for by Treasury notes, running from one to ten years, issued in such sums as can, by the application of the sinking-fund, be paid as they mature. The purchase of bonds not due has heretofore involved the payment of premiums, which it is believed can, in future, be avoided by the issue of such Treasury notes. The large accumulation of money now seeking investment affords a favorable opportunity for selling such notes bearing a low rate of interest. It is believed that they will form a popular security, always available to the holder, and readily convertible into money when needed for other investment or business. They should be in such form and denominations as to furnish a convenient investment for the small savings of the people, and fill the place designed by the ten-dollar refunding certificates authorized by the act of February 26, 1879. No other United States bonds than those stated become redeemable prior to the 1st of September, 1891, the date of maturity of the four-and-a-half per cent. bonds. The requirements of the sinking-fund prior to the maturity of the four-and-a-half per cent. bonds, for a period of ten years, from 1882 to 1891, both inclusive, are estimated as follows:

For the fiscal year ending June 30, 1882 .....	\$43,386,645 00
For the fiscal year ending June 30, 1883 .....	45,122,110 80
For the fiscal year ending June 30, 1884 .....	46,926,995 24
For the fiscal year ending June 30, 1885 .....	48,804,075 04
For the fiscal year ending June 30, 1886 .....	50,756,238 04
For the fiscal year ending June 30, 1887 .....	52,786,487 56
For the fiscal year ending June 30, 1888 .....	54,897,947 07
For the fiscal year ending June 30, 1889 .....	57,093,864 95
For the fiscal year ending June 30, 1890 .....	59,377,619 55
For the fiscal year ending June 30, 1891 .....	61,752,724 33
	<hr/>
	520,904,707 58
	<hr/> <hr/>

It may be that during this period, by the change of our financial con-

dition, or from unforeseen events, the Government will not be able, as in times past, to apply sums so large to the reduction of the debt; but it is probable that any temporary deficiency would soon be made good by increased revenue. This contingency may be provided for by the terms of the bonds.

The Secretary, therefore, recommends that provision be made for the issue of an amount not exceeding \$400,000,000 of Treasury notes in denominations not less than ten dollars, bearing interest not exceeding four per cent. per annum, and running from one to ten years, to be sold at not less than par, the amount maturing during any year not to exceed the sinking-fund for that year, and the proceeds to be applied to the payment of five and six per cent. bonds, maturing in 1881. It is believed that, with the present favorable state of the money-market, a sufficient amount of such Treasury notes, bearing an annual interest of three per cent., can be sold to meet a considerable portion of the maturing bonds; but it is better to confer upon the Department a discretionary power to stipulate for a higher maximum rate, to avoid the possibility of failure. Such a discretion is not likely to be abused, while a power too carefully restricted may defeat the beneficial object of the law.

It is also recommended that authority be given to sell at par an amount not exceeding \$400,000,000 of bonds of the character and description of the four per cent. bonds of the United States now outstanding, but bearing a rate of interest not exceeding three and sixty-five one-hundredths per cent. per annum, and redeemable at the pleasure of the United States after fifteen years, the proceeds to be applied to the payment of bonds redeemable on or before July 1, 1881. Though the amount of the two classes of securities recommended exceeds the amount of bonds to be redeemed, no more can be sold than the bonds to be redeemed, while the alternative authorized will permit a limited discretion to sell the securities most favorable to the Government. With the authority thus recommended, it is believed that the Department can within a year redeem all the five and six per cent. bonds now outstanding, and thus reduce the interest of the public debt \$12,000,000 per annum, and leave the debt in a form most favorable for gradual payment by the application of the sinking-fund without cost or premium.

#### RESUMPTION.

Nothing has occurred since my last annual report to disturb or embarrass the easy maintenance of specie payments. United States notes



are readily taken at par with coin in all parts of this country and in the chief commercial marts of the world. The balance of coin in the Treasury available for their redemption on the first day of November last was \$141,597,013 61, and the average during the year has not materially varied from that sum. The only noticeable change in the reserve is the gradual increase of silver coin caused by the coinage of the silver dollar and the redemption of fractional silver coin, more fully stated hereinafter.

The amount of notes presented for redemption for one year prior to November 1, 1880, was \$706,658. The amount of coin or bullion deposited in the Treasury, assay office, and the mints, during the same period was \$71,396,535 67. These deposits have usually been paid for in coin, through the clearing-house, but at times, when the currency in the Treasury would allow, and at the request of the depositors, they have been paid for in United States notes and silver certificates. Gold coin now enters largely into general circulation. Of the revenue from customs collected in New York for one year ending November 1, 1880, .57,475 per cent. was paid in gold coin, .00,125 per cent. in silver coin, .31,087, in silver certificates, and .11,313 per cent. in United States notes. While no distinction as to value is made between coin and notes in business transactions, a marked preference is shown for notes, owing to their superior convenience in counting and carrying. Many of the current payments from the Treasury are necessarily made in coin, and much of the funds held for the redemption of national-bank notes and of notes of banks that have failed or suspended is in coin. The total coin in the Treasury, at the close of business, November 1, was \$218,710,154, of which \$141,597,013 61 constituted the reserve fund for the redemption of United States notes, as above stated.

All the requirements of the resumption act have thus far been executed, and its wisdom has been fully demonstrated. It only remains to inquire whether any further measures are necessary or expedient to secure the maintenance of resumption. The Secretary expresses the utmost confidence that without new legislation the entire amount of United States notes now authorized and outstanding can be easily maintained at par in coin even if the present favorable financial condition should change; but, in order to accomplish this, the coin reserve must be kept unimpaired except by such payments as may be made from it in redemption of notes. Notes redeemed should be temporarily held in place of the coin paid out, especially if it appears that the call for coin is greater in amount than the coin coming in due course into the

Treasury or the mints. Ordinarily the superior convenience of notes will, as at present, make a greater demand for them than for coin; but in case of an adverse balance of trade or a sudden panic, or other unforeseen circumstances, the ample reserve of coin on hand becomes the sure safeguard of resumption, dispelling not only imaginary fears, but meeting any demand for coin that is likely to arise. In a supreme emergency, the power granted to sell bonds will supply any possible deficiency.

It is suggested that Congress might define and set apart the coin reserve as a special fund for resumption purposes. The general available balance is now treated as such a fund, but, as this balance may, at the discretion of the Secretary of the Treasury, be unduly drawn upon for the purchase or payment of bonds, it would appear advisable that Congress prescribe the maximum and minimum of the fund.

United States notes are now, in form, security, and convenience, the best circulating medium known. The objection is made that they are issued by the Government, and that it is not the business of the Government to furnish paper money, but only to coin money. The answer is, that the Government had to borrow money, and is still in debt. The United States note, to the extent that it is willingly taken by the people, and can, beyond question, be maintained at par in coin, is the least burdensome form of debt. The loss of interest in maintaining the resumption-fund, and the cost of printing and engraving the present amount of United States notes, is less than one-half the interest on an equal sum of four per cent. bonds. The public thus saves over seven million dollars of annual interest, and secures a safe and convenient medium of exchange, and has the assurance that a sufficient reserve in coin will be retained in the Treasury beyond the temptation of diminution, such as always attends reserves held by banks.

Another objection to the issue of United States notes is, that they are made a legal-tender in the payment of debts. The question of the constitutional power of Congress to make them such, is one for another branch of the Government. The Secretary of the Treasury is still of the opinion that this quality of legal-tender does not add to the usefulness, safety, or circulation of United States notes. So far as it excites distrust and opposition to this form of circulating-notes it is a detriment. The fear that a withdrawal of this attribute will contract the currency is as delusive as was the fear that resumption would have a like effect. The notes would still be received and paid out by the Government, and, like bank-notes, would not be refused in payment for debts while they were redeemable and

promptly redeemed in coin on presentation. As the quality of legal tender was attached to these notes when first issued, and was then essential to their value and circulation, the public mind is sensitive when any proposition is made that by possibility might impair their value, but it is their redemption in coin that makes them now equal to coin and of ready circulation in all the marts of the world. While this is maintained it becomes comparatively immaterial whether they are a legal-tender or not, and if by the action of Congress or the courts they are deprived of this quality they will still be the favorite money of the people.

Another objection to United States notes is, that the amount of the issue may be enlarged by Congress, and that this power is liable to abuse. This objection may be made to all the great essential powers of the Government. A sufficient answer is that, since their first issue, they have been carefully limited in amount, and invested with every quality to improve their value and circulation. Every effort to increase the amount, made during a period of great depression, failed. Now that they are redeemable in coin there is no temptation for over-issue.

These objections will, no doubt, in due time receive the careful consideration of Congress, and any practical difficulties in maintaining resumption will be met by new legislation. But the Secretary ventures to express the opinion that the present system of currency, the substantial features of which are a limited amount of United States notes, (with or without the legal-tender quality,) promptly redeemable in coin, with ample reserves in coin and ample power if necessary to purchase coin with bonds, supplemented by the circulating-notes of national banks issued upon conditions that guarantee their absolute security and prompt redemption, and all based on coin of equal value, generally distributed throughout the country, is the best system ever devised, and more free from objection than any other, combining the only safe standard with convenience for circulation and security and equality of value.

#### COINS AND COINAGE.

The coinage executed at the mints during the fiscal year has exceeded in value that of any previous year since the organization of the Government. Its total amount, not including the minor coinage, was \$84,100,172 50, of which it is estimated \$62,000,000 was probably from domestic, and \$21,000,000 from imported bullion.

The annual report of the Director of the Mint furnishes detailed statements of the coinage of gold and silver, the amount deposited,

parted, refined, or made into bars, the earnings, receipts, and expenditures, and other transactions and business operations of the mints and assay offices during the year, and contains valuable statistics and careful estimates of the production, consumption, and circulation of the precious metals in the United States and many other countries.

The inquiries as to the production, use in arts, coinage, and circulation of the precious metals, and the collection of other monetary statistics in our own and foreign countries, have been continued by the Mint Bureau, and much valuable information on these subjects has been obtained, and will be found in the report of the Director.

The deposits of gold during the last fiscal year amounted to \$98,835,096 85, being \$56,580,940 05 in excess of that in the previous year, notwithstanding a probable slightly diminished domestic production. Out of a total import at the port of New York of \$60,947,672 of foreign-gold coin and bullion, \$60,584,395 13 were deposited at the New York assay office, and there exchanged for United States coin or bars, or for current money. Nearly all of this coin and bullion, being at or above the United States standard, is excepted from a melting-charge under present regulations, and is transported at Government expense to the mint for coinage. The coinage law makes no provision for any charges for melting gold bullion which is not below the United States standard, when deposited for coin, and requires such deposits to be transported from the New York assay office to the Philadelphia mint at the expense of the Government. As nearly all the imported bullion deposited is in such a form that it is necessary to melt it, in order to ascertain its fineness and value, a modification of the law so as to authorize a charge for melting is recommended.

The gold imported at New York, during the earlier part of the last fiscal year, exceeded the capacity of the Philadelphia mint for coinage, with its ordinary working-force, without incurring expenses much above the specific appropriations for its support. The coinage of gold at Philadelphia had to be made subordinate to that of silver, in order to comply with the requirements of the law directing the purchase and coinage of \$2,000,000 worth of silver bullion in each month, and to satisfy the demand for minor coins authorized to be struck only at that mint. The mint was able, with its other work, to coin in gold an amount little exceeding on the average \$2,000,000 per month, but this was found sufficient to satisfy the immediate demands upon it for coin. At the close of the year there remained in the mints and New York assay office \$40,724,337 91, in gold bullion uncoined, nearly all of it imported.

The amount of coinage executed at the mints of the United States, during the fiscal year, was—

Gold.....	\$56, 157, 735 00
Standard-silver dollars .....	27, 933, 750 00
Fractional silver coins .....	8, 687 50
Minor coins.....	269, 971 50
<b>Total.....</b>	<b>84, 370, 144 00</b>

Of the gold coinage \$18,836,320 was in eagles, \$15,790,860 in half-eagles, and \$21,515,360 in double-eagles. Five-eighths of the coinage was in denominations which were less than \$20. This was not only a larger proportion than in any preceding year, but was in amount nearly equal to the total coinage in those denominations during the preceding thirty years.

The coin circulation of the country on January 1, 1879, the date fixed for resumption, is estimated from the statistics of coinage and excess of imports of coin over exports, to have been—

United States gold coin.....	\$273, 271, 707
United States gold bullion .....	5, 038, 419
United States silver coin.....	95, 516, 712
United States silver bullion .....	11, 057, 091
<b>Total.....</b>	<b>384, 883, 929</b>

This had increased, on the 30th of June last, by coinage and imports of coin, to—

United States gold coin .....	\$358, 958, 691
United States silver coin.....	142, 597, 020
<b>Total.....</b>	<b>501, 555, 711</b>

This was further increased from coinage and imports, during the four months, to November 1, by—

Coinage of gold.....	\$14, 544, 599
Excess of imports over exports of United States gold coin .....	1, 820, 591
<b>Total .....</b>	<b>16, 365, 190</b>
Coinage of silver.....	\$9, 113, 000
Excess of imports over exports of United States silver coin .....	567, 524
<b>Total .....</b>	<b>9, 680, 524</b>

There was in the mints and assay offices on the 1st of November, bullion held for coinage amounting to \$78,558,811 55 of gold, and \$6,043,367 37 of silver, making the total coin circulation and bullion available for coinage in the country of—

Gold .....	\$453, 882, 692
Silver .....	158, 320, 911
Total .....	<u>612, 203, 603</u>

#### STANDARD-SILVER DOLLAR.

In compliance with the provisions of the act of February 28, 1878, during the last fiscal year 24,262,571.38 standard ounces of silver bullion, costing \$24,972,161 81, (an average of \$2,081,013 48 per month,) were purchased, of which 24,005,566.41 ounces were coined into 27,933,750 standard-silver dollars. The total coinage of standard-silver dollars since the passage of the act, up to November 1, 1880, has been \$72,847,750, at which date \$47,084,450 were in the Treasury. Of the latter amount \$19,780,241 were represented by outstanding silver certificates, the amount in actual circulation at that date being \$25,763,291.

Since the passage of that act, the Department has issued numerous circulars and notices to the public in which it has offered every inducement which it could under the law, to facilitate the general distribution and circulation of these coins. It has required United States disbursing officers to pay them out in payment for salaries and for other current obligations, and it has offered to place the silver in the hands of the people throughout the United States without expense for transportation, when sent by express, and at an expense for registration-fee only, when sent by registered mail.

Notwithstanding these efforts, it is found to be difficult to maintain in circulation more than 35 per cent. of the amount coined. While at special seasons of the year, and for special purposes, this coin is in demand, mainly in the South, it returns again to the Treasury, and its reissue involves an expense for transportation at an average rate of one-third of one per cent. each time. Unlike gold coin or United States notes, it does not, to the same extent, form a part of the permanent circulation, everywhere acceptable, and, when flowing into the Treasury, easily paid out with little or no cost of transportation. The reasons for this popular discrimination against the silver dollar are:

1st. It is too bulky for large transactions, and its use is confined mainly to payments for manual labor and for market purposes or for



change. The amount needed for these purposes is already in excess of the probable demand.

2d. It is known to contain a quantity of silver of less market value than the gold in gold coin. This fact would not impair the circulation of such limited amount as experience shows to be convenient for use, but it does prevent its being held or hoarded as reserves, or exported, and pushes it into active circulation, until it returns to the Treasury, as the least valuable and desirable money in use.

For these reasons the Secretary respectfully but earnestly recommends that the further compulsory coinage of the silver dollar be suspended, or, as an alternative, that the number of grains of silver in the dollar be increased so as to make it equal in market value to the gold dollar, and that its coinage be left as other coinage to the Secretary of the Treasury or the Director of the Mint, to depend upon the demand for it by the public for convenient circulation.

The continued coinage of the silver dollar necessarily involves the expenditure of two million dollars per month of the current revenue, the proceeds of which must, as experience shows, mainly lie idle in the Treasury, involving a large expense for storage and custody. When issued, a considerable expense for its transportation is involved, it is taken reluctantly by the people, and is soon returned to the vaults of the Treasury. The tendency of this process is to convert into silver coin the reserve of gold coin held in the Treasury to maintain United States notes at par. The inevitable effect of the continuance of this coinage for a few years more will be to compel the Department to maintain its specie reserve in gold coin, irrespective of the silver on hand, or to adopt the single silver standard for all Government purposes. The object manifestly designed by the passage of the act for the coinage of the silver dollar was to secure to the people of the United States the benefits of a bimetallic standard of value. It was forcibly urged that to demonetize silver would increase the burden of debts, and rest the value of all property upon the quantity on hand of a single metal. It was not the intention of the framers of the act to demonetize gold, but to maintain both gold and silver as standards of value. This has been done for thousands of years; but only by adopting, as nearly as possible, the relative market value of the two metals as the ratio for coinage, and by changing the ratio adopted whenever for a period of years it was demonstrated that the market ratio had changed. The United States has conformed to this custom of civilized nations, and the Constitution recognized it by authorizing Congress to coin money, and to regulate its value.

Under this authority Congress provided, in 1793, that the ratio should be one ounce of gold to fifteen ounces of silver; and on the 28th of June, 1834, it changed the ratio to one ounce of gold to sixteen ounces of silver.

It would appear that Congress somewhat overrated silver in 1793, and underrated it in 1834, but it is now certain that sixteen ounces of silver are not worth one ounce of gold, and if silver were coined without limit on that basis, it would eventually bring us to a single silver standard, and reduce gold to a commodity, or drive it to foreign countries—a result not intended by the act of February 28, 1878.

The average cost of the silver in a standard dollar, as shown by the purchases for the Government from the date of the resumption act to this time, measured by the gold standard, is \$0.906, or in a ratio of 1 to 17.64. Upon this ratio a silver dollar, in order to be of equal value to a gold dollar, should contain 455.3 grains. As the expense of coining a silver dollar is equal to the value of about five grains of standard silver bullion, it is confidently believed that a silver dollar containing 450 grains, based upon a ratio of one of gold to about 17.5 of silver, could be safely coined, as demanded for use or exportation, without demonetizing gold or disturbing contracts or business, and with great advantage to the silver-mining interests of our country. Upon the facts stated, it would seem to be wise policy now, in the spirit of the Constitution, to regulate by law the coin-value of the two metals so as to conform to the market ratio.

The cost of recoinage the silver dollars already issued into dollars of the weight suggested is estimated at about one per cent., or \$728,477 50. Much confusion and delusion have arisen from treating as a profit the difference between the cost of the silver bullion coined into silver dollars and the face-value of the dollars coined therefrom. This difference, from February 28, 1878, the date of the act authorizing their coinage, to November, 1880, is \$8,520,871 45. From this should be deducted the expense already incurred in distributing the coin and by wastage, which amounts to \$262,008 01, leaving as the net nominal profit the sum of \$8,258,863 44, of which \$7,198,294 56 have been deposited in the Treasury, and \$1,060,568 88 remain in the mints. This nominal profit is burdened with the necessity of receiving, and thus practically redeeming, these dollars at their nominal value in gold coin, and of reissuing, transporting, and maintaining them in circulation. This burden will soon exhaust the nominal profit. When held by the Government the coins are of no more real value than an equal weight of standard-silver bullion. To the extent of the difference between their

bullion and nominal value, they are purely fiat money. This nominal profit applied to the purchase of silver bullion would be sufficient to meet the entire cost of converting the present dollars into an equal number of the proposed dollars; or, in other words, if the present dollars were converted into the less number of the proposed dollars, the nominal loss would be fully covered by the nominal profit now in the Treasury and the mints.

It may be better for Congress at the present time to confine its action to the suspension of the coinage of the silver dollar, and to await negotiations with foreign powers for the adoption of an international ratio; but, compelled by official duty to report upon this subject, the Secretary feels bound to express his conviction that it is for the interest of the United States now, as the chief producer of silver, to recognize the great change that has occurred in the relative market value of silver and gold in the chief marts of the world, to adopt a ratio for coinage based upon market value, and to conform all existing coinage to that ratio, while maintaining the gold eagle of our coinage at its present weight and fineness. He confidently believes that the effect of this measure would be to make our gold and silver coins the best international standards of value known. Already the double-eagle, issued without cost for coinage, and in greater sums than any other gold coin, and of equal value to any other coin, whether measured by weight or tale, is received without question in all commercial countries as the most convenient medium of exchange. It is believed that a silver dollar of the weight and ratio of the proposed coinage would be the best silver standard for international exchange, and that it would tend to fix the market value of silver bullion at the ratio proposed, and would thus, as far as practicable, avoid the changing relative value of the two metals, while giving a steady market for the silver product of our country.

In this connection, the attention of Congress is respectfully invited to the operation of the act approved June 9, 1879, requiring the redemption in lawful money, at the office of the Treasurer or any assistant treasurer of the United States, of the silver coins of the United States of smaller denominations than one dollar.

When fractional silver coins were authorized by the act approved February 21, 1853, they were made to contain 384 grains of standard silver to the dollar. This was subsequently changed by the coinage act of 1873 to 25 grammes or 385.8 grains. They thus contain 26.7 grains, or nearly  $6\frac{1}{2}$  per cent., less than the standard dollar. Prior to 1853, by reason of the large production of gold in California, the standard-

silver dollar and its fractional parts had risen in market value above par in gold, and were largely exported. To prevent their exportation, and in accordance with the example of Great Britain, the policy was adopted, by that act, of reducing the weight of the minor silver coin, and this policy operated well until, in the spring of 1862, both gold and silver ceased to circulate as money. During the suspension of specie payments a remarkable decrease in the value of silver occurred, and now the market value of the silver in a dollar of the fractional coin is only 82½ cents.

The amount coined prior to November 1, 1880, under the provisions of the resumption act, which substituted silver coin for fractional currency, was \$42,974,931. To this has been added a very large sum issued before the war, and again introduced into circulation since the resumption of specie payments. It is difficult to determine the amount of such old coinage in circulation, but it is believed to exceed \$22,000,000. Prior to the act of June 9, 1879, this fractional coin filled the channels of circulation, especially in commercial cities, and gave rise to the passage of that act. At that date there was in the Treasury \$6,813,589 fractional coin; on the 1st of November, 1880, the amount was \$24,629,489, from which it appears that \$17,815,900 has been redeemed with lawful money. The whole amount in the Treasury is counted as a part of its reserve, although it is a legal-tender only in sums not exceeding ten dollars, and is, therefore, not available as cash for general purposes. It would seem wise that the excess not needed for change should be coined into standard dollars, and that any further fractional coin, hereafter needed, should contain silver of approximate relative value to the standard coin. The nominal profit heretofore derived from this coinage is quite sufficient to cover the cost of this change. It is also respectfully suggested that the act of July 9, 1879, should be repealed. When fractional coin is issued as money, it should be treated like other coin, to be received by the Government upon the same conditions as by the people, but not, like paper money, to be redeemed. If it must be classed as money to be redeemed, it should be supported by a reserve, like other redeemable money.

#### NATIONAL BANKS.

The report of the Comptroller of the Currency contains much information in reference to the national-banking system, and gives tables showing the resources and liabilities of the national banks from the date of their organization to the present time, and also tables showing the number, capital, and deposits of the State banks, savings-banks,

## REPORT OF THE SECRETARY OF THE

and private bankers of the country, by States divisions, for a series of years.

The capital stock of the national banks on October 1, 1879, was \$457,553,850; surplus, \$120,518,583; and the total circulation outstanding, \$343,949,893.

National banks are organized in every State of the Union except Mississippi, and in every Territory except Arizona; and the total number in operation is 2,095, which is the greatest number that has been in operation at any one time.

The Comptroller devotes considerable space to the discussion of the operations of the national banks since the date of resumption of specie payments, and the evils as well as the benefits which are likely to arise from the large addition of coin to the circulating medium made since that date.

The capital stock of the national banks is \$47,000,000 less and the surplus nearly \$14,000,000 less than at the corresponding date in 1875. The loans of the banks at the date of their last returns were \$1,037,000,000, and the individual deposits \$873,000,000, the highest points reached since the organization of the system, the loans being \$207,000,000 greater and the individual deposits \$253,000,000 greater than in October, 1878, while the capital and surplus at the previous date were \$5,000,000 in excess of their present amounts.

The individual deposits and the public, private, and bank deposits, not deducting the amount due from banks and the amount of the clearing-house exchanges, have increased more than \$322,000,000, and amount to the unprecedented sum of \$1,155,000,000.

The Comptroller states that the abundance of money, and the low rates of interest, have made it difficult for capitalists to find satisfactory investments, and that he has, therefore, examined the statements of the banks for a series of years to ascertain if the banks have found use for their increased deposits. The amount of the loans of the banks in New York city, in October, 1879 and 1880, was 70.8 per cent. of the capital, surplus, and net deposits; while in 1878, it was 65.4 per cent.; in 1877, 68 per cent.; and in 1876, 65.1 per cent.; and the loans are now proportionably higher than at any time since 1873. The resources of the banks in the other principal cities of the country are shown by their reports for October 1, last, to have been then more fully employed than they were at the corresponding dates for the two previous years, although their business was not so much extended as it was during the four years following the crisis of 1873. The ratio of the loans of the banks in the country districts to their

capital, surplus, and net deposits was, on October 1, 7.3 per cent. less than it was at the corresponding date in 1875, and 5.2 per cent. less than in 1877. The opportunities for using money in this group of banks is not in proportion to the increase of their deposits, and their balances in other banks have by no means diminished.

The tables given by the Comptroller show that, during the past two years, the loans of the banks in the city of New York have been extended to a much greater degree proportionably than the loans in other parts of the country, and that the cash reserves of the banks in New York have been unprecedentedly low. While the aggregate lawful-money reserve has, as far as known, always been held by this class of banks, it has frequently been very close, some of the banks expanding their loans beyond reasonable limits, and relying upon imports of gold and purchases of bonds by the Treasury to replenish their deficient reserves.

The act of June 20, 1874, repealed the law requiring reserves to be held upon circulation, thus largely reducing the amount of legal reserve required. The enormous increase of individual and bank deposits during the last year should not be accompanied with a proportional increase of loans, since such increase would, it is believed, have the effect, indirectly, of increasing the market prices of many railroad and other stocks and bonds largely beyond their actual value. The banks in New York city hold more than \$100,000,000 of the funds of other banks, which are payable on demand, and it is of the greatest importance that they should at all times exhibit great strength if they would keep themselves in condition for an adverse balance of trade, and for the legitimate demands of those dealers who confide in them.

The Comptroller gives some interesting tables showing the amount of coin and currency in the country on the day of resumption of coin payments, and on November 1 of the present year, together with the amount of coin and currency in the Treasury and in the banks, and the amount in the hands of the people outside of these depositories, from which it will be seen that while the amount in the Treasury and in the banks has increased more than \$50,000,000 during that period, the amount in the hands of the people has also increased more than \$195,000,000.

The most gratifying exhibit in the condition of the national banks is, that they are now doing business upon a specie basis, the amount of gold coin held by the national banks having increased since the day of resumption from \$35,039,201 to \$102,851,032, which is but about \$18,000,000 less than the whole cash reserve required by law.



The national banks hold nearly \$200,000,000 of United States bonds, which will mature on or before July next.

The whole amount of United States bonds held by the national banks as security for circulation and for other purposes is \$403,369,350, and the average amount of capital invested by the State banks, savings-banks, and private bankers for the six months ending May 31, 1880, as shown by the returns to this Department for purposes of taxation, is \$228,053,104, making a total of \$631,422,454.

The profit upon circulation, to the national banks, at the present price of bonds in the market is estimated not to exceed one and one-half per cent. upon the capital invested, and the amount of State and National taxes is more than four per cent. upon the amount of circulation.

The banks and bankers of the country have complained that the taxes upon bank deposits and bank capital since the passage of the first internal-revenue act, have been greatly disproportioned to the amount paid by other classes of property, and it would seem that the time has now arrived, as hereinbefore recommended, when Congress might properly repeal all taxes on capital and deposits, retaining the present tax on circulation.

The national-banking system has fully realized all the expectations of its founders. It has furnished a safe currency, of uniform circulation, carefully guarded against counterfeiting, protected by ample reserves, and promptly redeemed both at the banks and the Treasury. No other legislation in respect to these important corporations seems to be required at the present session.

#### PUBLIC MONEYS.

The monetary transactions of the Government have been conducted through the offices of the United States Treasurer, nine assistant treasurers, one depositary, and one hundred and thirty national-bank depositaries.

The receipts of the Government, amounting, during the fiscal year, as shown by warrants, to \$545,340,713 98, were deposited as follows: In independent-treasury offices, \$404,301,155 37; in national-bank depositories, \$141,039,558 61.

As far as accounts have been adjusted for the last fiscal year there appear to be no losses to the Government by public officers engaged either in the receipt, safe-keeping, or disbursement of the public moneys. It is to be regretted, however, that the apprehension of loss through the issue of duplicates of coupon bonds, expressed by the First Comptroller, in his report for last year, has proven too well founded. Upon

what seemed to be sufficient evidence of the destruction of a \$500 coupon bond, a duplicate was issued several years since, and subsequently redeemed, as required by law. Sometime after this redemption the original bond was presented intact by an innocent holder, and, upon the recommendation of the Comptroller, it was redeemed. While there seemed to be no alternative but to pay this bond, the availability of any existing appropriation for the purpose may be questioned, and Congress will be asked for some needed legislation to meet such cases.

Additional legislation to authorize the refund of moneys paid into the Treasury, in excess, by receivers of public moneys, is recommended by the First Comptroller and meets with my approval.

The coinage of the silver three-cent and five-cent pieces was discontinued by the coinage act of 1873, and that of the silver twenty-cent piece by the act of May 2, 1878. Since the act of June 9, 1879, providing for the exchange of subsidiary coins for lawful money of the United States, a large amount of silver coins of the above-mentioned denominations has accumulated in the several sub-treasury offices. These coins constitute a portion of the Treasury balance, and, as they are not again paid out after being received in exchange for lawful money, they become practically unavailable for current use. The necessary legislation for their proper disposition is recommended.

By reference to the tables accompanying this report, it will be seen that, since the organization of the Government, there has been paid into the Treasury to the close of the last fiscal year..\$18,570,348,647 05 And that there has been paid out upon warrants in consequence of appropriations made by law, to the same date, the sum of ..... 18,334,854,201 62

Leaving unexpended, charged to the Treasury, the sum of ..... 235,494,445 43

This amount, however, is not all in actual cash, but is made up of items as follows:

Amount deposited with the States under act of Congress approved June 23, 1836.....	\$28,101,644 91
Amount arising from defalcations, irredeemable bills, &c.....	2,708,964 18
Cash.....	204,683,836 34
Total.....	235,494,445 43

As the first two items are not available for disbursement, it would

seem unnecessary to carry them longer as part of the balance; but neither of them can be disposed of without authority of law, though the amounts represented have passed beyond the control of the Department, or entirely disappeared.

The first amount was by law deposited with the States, not paid to them, and the Department cannot withdraw it without further authority. The second item mentioned arose many years ago from the failure of State banks to redeem their notes which the Government held, and of public officers to properly account for moneys received by them for the credit of the Treasury. These items, for convenience, have already been informally omitted from the current cash books and the monthly debt statements of the Department. There are also a few other items of like character, still treated as cash, on which no such action has yet been taken. To their amount they would further reduce the available balance on hand. A full statement of these unavailable amounts has been published for several years in the annual reports of the Treasurer of the United States.

It is recommended that authority be given to reimburse the Treasurer for these unavailable amounts, they being no longer under his control, though he is charged therewith, and to charge the amounts to the parties from whom they are respectively due. Such a course would take no money from the Treasury, would relieve no public debtor from any legal liability, while it would greatly simplify the accounts of the Treasury, and would cause the books of the Department to show always the real instead of the apparent balance of cash on hand available for disbursement.

It will be understood that the apparent discrepancies which have arisen from these unavailable amounts are due to no fault of accounting or book-keeping. On the contrary, it is worthy of note that the amount of these unavailable items, together with the actual money in the Treasury, makes precisely the amount of the moneys received by the Treasury and not expended, as shown by the books of the several bureaus of the Department. No better proof of the accuracy with which the accounts of the great fiscal operations of the Government have been kept could be asked for or obtained.

The amount of money reported on hand to the credit of the Treasurer is not, however, the entire amount of public moneys held by independent-treasury officers and depositary banks. As fiscal agents of the Government these officers and banks have held the funds advanced for disbursement to public officers, and also other funds in trust for the redemption of national-bank notes and for other purposes, aggregat-

ing a monthly average during the past year of over sixty millions of dollars. Under the existing system, by which the Government practically holds and disburses its own money and that of its officers, the fiscal operations are conducted without disturbance, embarrassment or favoritism, and with satisfaction to all concerned.

#### CUSTOMS.

The revenue from customs for the year ended June 30, 1880, was \$186,522,064 60; the revenue for the preceding year was \$137,250,047 70, an increase of \$49,272,016 90. This large gain was due in part to an exceptional demand for certain classes of foreign merchandise, principally iron and steel and their manufactures, which is not likely to be maintained during the present year. Of this sum, about \$42,000,000 was collected on sugar; \$18,500,000, on manufactures of silk; \$19,000,000, on manufactures of iron and steel; \$10,000,000, on manufactures of cotton; \$29,000,000, on wool and manufactures of wool; and \$6,000,000, on wines and spirits, making a total of nearly \$125,000,000 collected on these six classes of articles. The precise amounts, however, cannot be given, because the statistics are based, to a certain extent, on unliquidated entries.

The expenses for collection for the past year were \$5,995,878 06, an increase over the preceding year of \$510,099 03, occasioned to a large extent by the increase in the importation of bulky articles.

The expenses of collection and percentage of cost for the past four years were as follows:

	Expenses.	Percentage.
1877.....	\$6, 501, 037 57	4. 90
1878.....	5, 826, 974 32	4. 41
1879.....	5, 485, 779 03	3. 94
1880.....	5, 995, 878 06	3. 18

It is believed that, by reason of the vigilance of the customs officers, frauds upon the customs revenue have not during the past year been so extensive as formerly. The measures referred to in the last report of the Secretary for a more faithful collection of the duties on sugar have been continued in force, but they are and should be regarded as but temporary, and not as justifying longer delay in the legislation necessary to place this most important feature of our commerce upon a foundation which will enable the Government and the importers to conduct their business with greater certainty than at present. It is earnestly hoped that a settlement of this much-vexed question may be made by Congress at its present session.

The present tariff is but a compilation of laws passed during many succeeding years, and to meet the necessities of the Government from time to time. These laws have furnished the greater part of our revenue, and have incidentally protected and diversified home manufactures. The general principle upon which they are founded is believed to be wise and salutary. No marked or sudden change, which would tend to destroy or injure domestic industries built upon faith in the stability of existing laws, should be made in them. Changes, however, have occurred in the value of some articles, caused mainly by important inventions and improvements in the mode of manufacture. These have produced irregularities and incongruities in the rates of taxation, so that on some articles the duties have become prohibitory, while on others the rate of taxation is too low. Some duties ad valorem might, with the experience acquired under existing laws, be converted into specific duties. Many articles which do not compete with domestic industry, and yield but a small amount of revenue, might be added to the free list. The changes suggested would tend to simplify the work of appraisement, remove the irritations among business men, which so often arise in an enforcement of the laws imposing duties ad valorem, and reduce the cost of collection. Former reports of the Secretary exhibit many facts, showing in detail the necessity of such modifications.

By section 2501 of the Revised Statutes, an additional duty of 10 per cent. ad valorem is imposed on all goods (except wool, raw cotton, and raw silk) the growth or production of countries east of the Cape of Good Hope, when imported into the United States from places west of the cape. Coffee produced in the Dutch Colonial possessions beyond the cape, and imported from places this side of the cape, has been charged with this additional duty. The fifth article of the Treaty with the Netherlands, of February 26, 1853, provides that discriminating duties against tea and coffee, the products of the possessions of the Netherlands, shall be removed by the United States whenever the discriminating export-duties imposed by the government of the Netherlands in favor of direct shipments to Holland of the products of its colonial possessions are removed. The discriminating export-duties were sometime since removed by the Netherlands government, and it is, therefore, incumbent upon the United States, under the treaty, to remove the discriminating import-duties on tea and coffee produced in the possessions of the Netherlands. It is recommended that early action be taken by Congress in the matter.

In this connection it may be questioned whether the discriminating

duties imposed by section 2501 of the Revised Statutes, should not be altogether repealed. The provision of law now embodied in that section was originally passed to encourage the direct shipment to the United States of goods around the Cape of Good Hope, as against the shipment of such goods to Europe and their transshipment thence to the United States.

The Suez Canal has, however, so changed the course of trade, that most of the goods which are produced beyond the cape and imported into the United States are sent to European ports and transshipped thence for the United States. It therefore often becomes difficult to decide whether such goods, when shipped from the country of production, were destined for the American or European markets, the shipments being rarely made on through-bills of lading. The total revenue derived from this source for the past year was only \$167,436 31. It is recommended that the provision of law in question be repealed.

#### INTERNAL REVENUE.

From the various sources of taxation under the internal-revenue laws, the receipts for the fiscal year ending June 30, 1880, were as follows:

From spirits .....	\$61, 185, 508 70
From tobacco .....	38, 870, 140 08
From fermented liquors .....	12, 820, 802 84
From banks and bankers .....	3, 350, 985 28
From penalties, &c .....	383, 755 08
From adhesive-stamps .....	7, 668, 394 22
From arrears of taxes under repealed laws .....	228, 027 73
Total .....	<u>124, 516, 614 02</u>

The foregoing statement does not include the tax collected by the Treasurer of the United States from national banks, which amounts to \$7,014,971 44.

The amount of collections exhibited in the foregoing table includes commissions on sales of stamps, paid in kind, as well as amounts collected in 1879, but not deposited till within the last fiscal year. An apparent variation consequently arises between the amounts of collections given in the tables and those shown by the covering warrants of the Treasury.

The increase of the revenue from spirits during the last fiscal year was \$8,615,224 10. But there was a decrease in the revenue from to-



bacco in its various forms of manufacture, for the same period, of \$1,264,862 57, which was to be expected on account of the reduction in the rate of taxation upon that commodity. The increase of income from the tax on fermented liquors was \$2,100,482 76. The total increase of revenue from spirits and fermented liquors was \$11,934,075 99. The increase of revenue from taxes on banks and bankers was but \$152,101 69 over the income for 1879. The total increase of internal revenue, after deduction of the decrease of income from tobacco and the decrease from collections on the arrears of taxes, was \$10,598,147 15.

The Secretary cannot too strongly urge the importance of stability in the rates imposed on spirits, tobacco, and fermented liquors. These articles are regarded by all Governments as proper objects of taxation. Any reduction in the rates imposes a heavy loss to the owner of the stock on hand, while an increase operates as a bounty to such owner. When the rate is fixed, the trade adapts itself to it. A change disturbs the collection of the tax and the manufacture of the article. As already suggested, the time is opportune for reducing the subjects of internal taxation to the articles named and the taxes on circulating-notes of banks. The taxes proposed to be repealed yielded during the last fiscal year as follows:

From banks and bankers other than national.....	\$3,350,985 28
From national banks other than on circulation.....	4,438,134 80
From adhesive stamps.....	7,668,394 22
	<hr/>
In all .....	15,457,514 30
	<hr/> <hr/>

In case of such repeal, ample time should be given to exhaust the tax-paid stamps without loss to the manufacturer.

#### EXPORTS AND IMPORTS.

The exports and imports during the last fiscal year have been as follows:

Exports of domestic merchandise.....	\$823,946 353
Exports of foreign merchandise.....	11,692,305
	<hr/>
Total.....	835,638,658
Imports of merchandise.....	667,954,746
	<hr/> <hr/>
Excess of exports over imports of merchandise.....	\$167,683,912
Aggregate of exports and imports.....	1,503,593,404

Compared with the previous year, there was an increase of \$125,199,217 in the value of exports of merchandise, and an increase of \$222,176,971 in the value of imports. The annual average of the excess of such

imports over exports for ten years previous to June 30, 1873, was \$104,706,922, but for the last five years there has been an excess of exports over imports of merchandise amounting to \$920,955,387—an annual average of \$184,191,077. The specie value of the exports of domestic merchandise increased from \$376,616,473 in 1870, to \$823,946,353 in 1880—an increase of \$447,329,880, or 119 per cent. The imports of merchandise increased from \$435,958,408 in 1870, to \$667,954,746 in 1880—an increase of \$231,996,338, or 53 per cent.

There was an increase in the value of the exports of wheat, wheat-flour, and corn, as compared with similar exports of the preceding year, of \$78,253,837, or 39 per cent.; an increase in the value of the exports of cotton of \$49,231,655, or 30.3 per cent.; an increase in the value of the exports of provisions of \$10,184,592, or 8.7 per cent.; and an increase in the exports of live animals of \$4,394,366, or 38.3 per cent. There has also been a noticeable increase in the value of the exports of tallow, oil-cake, vegetable-oils, seeds, clocks and watches, hops, wool, and a few other commodities. During the last fiscal year breadstuffs constituted 35 per cent. of the value of our exports of domestic merchandise, cotton 27 per cent., and provisions 15 per cent.

The imports of merchandise for the past year exceeded such imports during any previous year in the history of the country. The leading articles, showing marked increase in quantity or value imported, are coffee, hides and skins, raw silk, and tea, all of which are free of duty, and copper, manufactures of cotton, silk, and wool, fruits, glass, iron and steel, lead, leather, precious stones, leaf tobacco, wool, and zinc. The imports of unmanufactured wool increased from 39,000,000 pounds in 1879 to over 128,000,000 pounds in 1880. The value of the imports of railroad-bars of iron and steel increased from \$70,071 in 1879, to \$4,952,286 in 1880.

During each year from 1862 to 1879, inclusive, the exports of specie exceeded the imports thereof. The largest excess of such exports over imports was reached during the year 1864, when it amounted to \$92,280,919. But during the year ended June 30, 1880, the imports of coin and bullion exceeded the exports thereof by \$75,891,391. During July, August, September, and October of the current fiscal year the imports of specie were \$47,940,805, and the exports were \$4,721,828, making an excess of imports over exports of \$43,218,977.

The large and continued excess of the value of the exports of merchandise over the imports of merchandise appears to render it probable that we shall see a continuation of, and, perhaps, a large increase in, the flow of specie into this country.

## EXPORTATION AND IMPORTATION OF CATTLE.

In a letter of February 19, 1880, from this Department to the Speaker of the House of Representatives, the attention of Congress was called to the prevalence of the disease known as pleuro-pneumonia, or lung-plague, in neat-cattle, and some recommendations were made as to the proper legislation on the subject.

It may be assumed that this disease has never existed in this country west of the Alleghany mountains; and that it has not for a long time existed in Canada, or in this country near the line of Canada. The exportation of live horned cattle from the United States is very large, and is rapidly increasing, the cattle going mostly to Great Britain. For the eight months ended August 31, 1880, the value of such animals exported was \$12,462,837, which is nearly double the value of the exportation for the same period in 1879.

By an order of the Privy Council of Great Britain, all American cattle must be slaughtered at the port of arrival within ten days. The effect of this order is to prevent the shipment of any but fat cattle; and it entails great loss as to that class of animals, by compelling the immediate slaughter of such as are injured, or become sick upon the voyage, and therefore of little value for food. It also prevents the owners from driving the cattle from the port of importation to a better market, or from keeping them until the market improves. Furthermore, there is a large demand in England for store or stock-cattle, to be fed and fattened in that country for its own markets, a demand which this country could supply to an unlimited extent. It is believed that this trade, if unrestricted, might far exceed the trade in fat cattle. The losses and embarrassments by reason of the order for immediate slaughter are, commercially considered, very great. The British government, however, is ready to rescind it when it may be done without danger of spreading pleuro-pneumonia in their country through importations from the United States.

The question of the rescission of the order has been the subject of official discussion between this Government and the Government of Great Britain, as well as in Parliament. It is believed that whenever Congress makes provision for the extinction or prevention of the disease, or for such security of the great routes of travel from the West to the seaboard as will make it reasonably certain that the cattle shipped from our ports, or any of them, will not carry infection with them, the order of Council requiring immediate slaughter will be rescinded.

The recommendation that a commission be created, whose duty it shall be to investigate reports of the existence of the disease, and to

collect information respecting it, reporting the results to some Department for official publication, is renewed. It is further recommended that such commission be authorized to co-operate with State and municipal authorities, and corporations and persons engaged in the transportation of neat-cattle, and establish regulations for the safe conveyance of such cattle from the interior to the seaboard, and the shipment of them, so that they may not be exposed to the disease; and that such commission, also, may establish such quarantine stations and regulations as may be deemed necessary to prevent the spread of the disease by importations from abroad. It is believed that the legislation thus indicated, properly executed, will induce the Government of Great Britain to rescind its order for immediate slaughter, and thus promote a very large increase in the exportation of neat-cattle from this country. Whether Congress should go further, and undertake the extirpation of the disease in the States where it now exists, is a question of more difficulty, and it is deemed best to leave that part of the subject for independent consideration.

#### COMMERCE AND NAVIGATION.

The records of the Register of the Treasury show that the total tonnage of vessels of the United States, at the close of the fiscal year ended June 30, 1880, was 4,068,034 tons. Of this amount 1,352,810 tons were comprised in 2,378 vessels registered for the foreign trade, and 2,715,224 tons in 22,334 vessels enrolled and licensed for the coasting trade and fisheries. There has been a decrease of 138,723 tons in vessels employed in the foreign trade, and a decrease of 37,157 tons in such as were engaged in the domestic trade.

The vessels built during the last fiscal year, with their tonnage, are exhibited in the following table:

	Number.	Tonnage.
Sailing-vessels.....	460	59,057
Steam-vessels .....	348	78,854
Canal-boats enrolled .....	17	1,887
Barges .....	77	17,612
Total.....	<u>902</u>	<u>157,410</u>

The decrease in the tonnage built during the last fiscal year, as compared with that of the preceding year, was 35,620 tons.

#### TRADE IN AMERICAN AND FOREIGN BOTTOMS.

The total tonnage of vessels entered at the seaboard ports from foreign countries was 13,768,137 tons during the year ended June 30 1879, and 15,240,534 tons during the last fiscal year, showing an increase

of 1,472,397 tons, or about 10½ per cent. The American tonnage entered exhibited an increase of only 78,631 tons, or 2½ per cent., while the foreign showed an increase of 1,393,766 tons, or about 13 per cent. The tonnage in these cases is computed on the basis of the number of entries of vessels and not on the number of vessels, and is restricted to the seaboard ports. Of the merchandise brought in at seaboard, lake, and river ports during the last fiscal year, an amount of the value of \$149,317,368, was imported in American vessels, and \$503,494,913 in foreign; of the exports of merchandise an amount of the value of \$109,028,860 was shipped in American and \$720,770,521 in foreign vessels. Of the combined imports and exports of merchandise 17 per cent. only of the total value was conveyed in American vessels.

In 1856 over 75 per cent. of the total value of the imports and exports was carried in American vessels, while last year but 17 per cent. was carried in such vessels, though the total volume of commerce has risen from a value of \$724,000,000, to over \$1,500,000,000.

The disproportion between the commodities carried in American and those carried in foreign vessels still continues, and is even greater than during the fiscal year 1879, the amount of merchandise transported in our vessels during the fiscal year 1880, estimated on the basis of value, being five per cent. less than that transported during the former year.

The foreign carrying-trade in American bottoms is more than 50 per cent. less than it has been, or than it might be, and if it is desirable to save to the country the annual freightage on merchandise of the value of twelve hundred millions of dollars, the only course to reach that result would seem to be to increase our registered shipping. But while the ordinary demand for increased tonnage causes no annual increase in the building of vessels, the only method available, as a measure of public policy, of effecting such an increase, is either to allow American citizens the privilege of purchasing vessels of foreign build, to give a bounty on home-built vessels, or to await the increase of American-built vessels and their tardy substitution in the foreign trade for those of other nationalities. Doubtless the number of vessels of home-build will be adequate in time to take up the freightage lost to American bottoms in consequence of the war of the rebellion. At present, however, the demand for vessels to carry on our immense import and export trade does not seem to so stimulate the ship-building industry as to prevent an annual decrease in the number of ships built. The present facilities for freighting in foreign vessels appear to be a greater discouragement to that industry than would be the privilege of purchasing such vessels.

## PREVENTION OF COLLISIONS AT SEA.

In 1864, Congress established certain rules and regulations for preventing collisions on the water which are still in force. The principal maritime nations of the world have recently concurred in adopting a new code of regulations for the same purpose. These regulations went into operation on the first of September last. In many points they differ materially from those adopted in 1864 which govern our own mercantile and naval marine. The result is, that our vessels are subject, in certain contingencies, to one set of rules for navigation in foreign waters and to different ones when sailing in our own. In cases of collision accordingly, they are subject to liabilities, which vary with the waters in which they are employed, most foreign maritime courts conforming in their decrees to the new regulations, while our own adhere to the regulations of 1864.

I would recommend that this uncertain status of our vessels be removed by the prompt acceptance by statute of the regulations already adopted by other nations, leaving the correction or amendment of the regulations to international arrangement if Congress should consider such amendment imperatively required.

## INTERNAL COMMERCE.

The reports of tonnage moved on the principal trunk-railroad lines of the country, and the more recent data in regard to traffic on inland water lines and coastwise upon the ocean, indicate that the internal commerce of the United States has rapidly increased during the past year. Railroads now constitute the principal avenues of our internal trade. The traffic over the four east and west trunk lines greatly exceeds in value both the commerce of the Mississippi river and its tributaries and the commerce on the Great Lakes.

Through the facilities afforded for continuous traffic by means of combinations entered into between connecting railroads and between railroads and ocean-steamer lines at the principal seaports of the country, the interior cities are now able to carry on a direct trade not only with all parts of the country, but are also able to engage in direct foreign commerce, both as to the exportation of American products to other countries and to the importation of foreign merchandise into the United States. Through these facilities all the principal cities of the country have been brought into direct competition with each other. The sphere of the commercial operations of each city has been greatly extended, while competition has become sharper and profits have been reduced to a narrower margin. The varied productions and industries



of the different States and sections of our country present highly favorable conditions for the development of internal trade. Already our internal commerce many times exceeds in value our foreign commerce. Its rapidly-increasing importance seems to justify a more liberal appropriation than has heretofore been made for the purpose of collecting and presenting annually information in regard to it, especially such information as may be of service for the use of Congress.

#### CLAIMS.

The necessity of legislation for the adjudication of claims now within the jurisdiction of this Department has been called to the attention of Congress in several former reports. It is deemed unnecessary to repeat in detail the reasons which exist for the enactment of the measures which have heretofore been recommended. It will be sufficient to call the attention of Congress, in a condensed statement, to the objects which it is proposed to accomplish.

As suggested in a former report, the great object of legislation on the subject of claims is, to render their adjustment speedy and final, and to discourage the allowance of old demands, or the re-examination of those already settled. A general provision of law by which all important disputed questions of law or fact may be referred to the Court of Claims for trial, would greatly relieve the officers of this Department, and tend to promote the ends of justice. That tribunal adopts the methods used by all courts of justice for ascertaining the truth, which include the requirement of the best evidence of which the nature of the case admits; the cross-examination of witnesses, instead of *ex parte* statements; and public hearings, and a public record of proceedings. In such legislation express provision should be made against the rehearing of claims which have been once adjudicated in any court, or by Congress, or by the accounting officers of the Treasury, or that have been barred by any statute of limitations.

The former recommendation that some limitation of time within which claims against the Government shall be prosecuted, or, for want of such prosecution, be forever barred, is renewed. For the reasons which have introduced statutes of limitation into the codes of all civilized nations, it is again recommended that it be provided by law that no claim pending in any of the Executive Departments shall be allowed unless presented for payment within six years after such claim has accrued, with the usual exception in the case of those prevented by infancy or otherwise from presenting their claims within such time, and that provisions of a similar character in favor of those against whom the Government holds claims may be enacted. The Department

is well organized for the investigation of claims accruing in the ordinary course of current business, and decisions thereon by the accounting officers made final by existing laws should not be referred to the Court of Claims or any other tribunal for examination.

#### TRIBUNAL FOR TRIAL OF REVENUE CASES.

About two-thirds of the customs business of the country is transacted at the port of New York. The multiplicity of suits growing out of the vast amount of business constantly crowds the dockets of the courts, so that there is great delay in the decision of cases. The speedy decision of customs cases is of great importance both to the Government and to the importers, and great embarrassment ensues in the administration of the customs laws from the usual delay of three or four years before a final decision can be reached.

The Secretary renews his recommendation that a special tribunal be created by law for the trial of customs-revenue cases at the port of New York.

He also repeats his recommendation that the Secretary of the Treasury be authorized, in cases of variance between the appraised value, or classification for duty, of similar merchandise at two or more ports of the United States, to prescribe regulations under which the board of general appraisers, or a majority of them, may decide upon the true dutiable value or classification of such imports; and that authority be given for the appointment of three additional general appraisers.

#### BUREAU OF ENGRAVING AND PRINTING.

During the year the building for the Bureau of Engraving and Printing, authorized by the act of June 20, 1878, has been completed, and the bureau has been removed from the Treasury-Department building, without occasioning any material delay in its business, and successfully established in its new quarters.

The bureau now has superior facilities for executing the work pertaining to it; and, as it has been demonstrated that such work can be executed therein more safely and more economically, all things considered, than elsewhere, the necessary steps have been taken to have all the work of engraving and plate-printing, required by the Treasury Department, to be performed in the bureau.

#### PRINTING INTERNAL-REVENUE STAMPS.

In making the appropriation for "dies, paper, and stamps" for the present fiscal year, Congress required that the engraving and printing of internal-revenue stamps should be done in the Bureau of Engraving and Printing of the Treasury Department, provided the cost did not

exceeded the price paid under existing contracts. In accordance with this requirement, an estimate was procured from the bureau for the printing of certain internal-revenue stamps, then being done under contract with the American Bank-Note Company of New York, and, as the rates proposed in the estimate appeared to be lower than those paid to the company, the contract with the company was annulled as soon as practicable, and, in the month of October, the printing of the stamps was transferred to the Bureau of Engraving and Printing, where it is now being done with advantage to the Government.

#### DISTINCTIVE PAPER.

The new distinctive paper, the adoption and manufacture of which was mentioned in the last annual report, has been used for printing notes, certificates, checks, and other obligations since January last, and has been found to answer the requirements of the Government in all respects. It is believed that the special features of this paper will afford increased protection against counterfeiting, while its superior quality, and consequent longer life while in circulation, renders its adoption a measure of economy as well as safety.

It is estimated that the saving on account of the reduction in its price below that paid for the paper heretofore used will be not less than \$50,000 for the present fiscal year. If a large supply of paper should be required for an issue of bonds during the year, the saving will be correspondingly greater.

#### LIGHT-HOUSE ESTABLISHMENT.

The Light-house Establishment continues in its usual satisfactory condition. During the fiscal year it has put into operation twenty-five new light-houses, eighty-two new river-lights, one new fog-signal, eleven new automatic whistling-buoys, and fifteen new buoys of the ordinary kind. It has discontinued eight lights, which were no longer needed, and has changed the characteristics of twelve others, so that they will be more useful than heretofore to commerce and navigation.

The board has continued the work of changing the burners of the smaller lights in the several light-house districts, so as to substitute mineral-oil for lard-oil as an illuminant, until mineral-oil is now used in all its lights, with the exception of about one hundred and twenty five of the first, second, and third orders. The board has also, by careful and long-continued experiment, been enabled to use mineral-oil as an illuminant on light-ships and in screw-pile light-houses, as it is believed, without danger to these isolated stations. In so doing it has, in each instance, increased the power of the light, while it has at the same time decreased its cost.

The board has continued its experiments with the electric light as far as was possible in the laboratory. It will be unable to determine its practical value until it has a working-test in a light-house. It has again submitted an estimate for this purpose, which is commended to the attention of Congress.

The curious and interesting experiments of the board, to ascertain the laws of sound when acting through fog and snow, have been continued, and seem to be tending to practical results of importance to commerce.

#### COAST AND GEODETIC SURVEY.

In the coast and geodetic survey, the work of its several branches has advanced steadily. For public uses essential in engineering and in local development generally, information is gathered by a comprehensive system, which gives results of great exactness. Relative positions along the coast and on the continent are ascertained by final measurements. Permanent dangers to navigation are carefully marked on the charts of the survey, as well as their relation to light-houses, buoys, beacons, and sailing-lines. The publication of a third volume of the Atlantic Coast Pilot, with sailing directions and descriptions of the local dangers, is in progress, and good advance has been made in a compilation of the same kind for the Pacific coast. For the principal ports of the eastern and western coasts of the United States, tide-tables are computed one year in advance, and printed for the use of navigators. All the publications of the survey are in great request. The demand for its charts has greatly increased. Of upwards of eighteen thousand points determined in latitude and longitude along the coast, and in parts of the interior, the intervening distances and bearings of the junction-lines are recorded in the office, with descriptions of the ground-marks; and thus, what was indispensable for the coast development avails for State surveys. The requisitions for such data increase in number yearly. The annual reports of the survey show that the Engineer department, the Light-house Board, harbor commissions, and State authorities have drawn largely from this source for information necessary in connection with proposed improvements. Calls are frequent in regard to the variation of the compass for the past as well as for the present time. For the present era the variation in all parts of the United States is shown by a map published within the year. Deep-sea soundings made within the year have incidentally added subjects of special interest for the study of naturalists. Within the year the survey has co-operated with the Mississippi River Commission.

## THE MARINE-HOSPITAL SERVICE.

The Supervising Surgeon-General of the Marine-Hospital Service reports that 24,860 seamen were afforded relief during the fiscal year ended June 30, 1880, and 290,501 days' relief in hospital were furnished; 13,697 patients were treated at the dispensaries; 795 persons were examined physically as a preliminary to shipping them; 2,870 pilots were examined for color-blindness, of whom 64 were found to be color-blind; and 25 seamen, hopelessly diseased, have been furnished transportation from hospitals to their own homes. The number of patients treated shows an increase of nearly 4,000 over the previous year, and the cost *per capita* has been reduced to \$16 18, the lowest rate yet reached. The ordinary expenses of the service have been \$370,744 64, and the extraordinary expenses \$31,440 85, making a total of \$402,185 49, the details of which will be found in the report of the Surgeon-General.

The first section of the act approved March 3, 1875, directed the Secretary to "cause to be prepared a schedule of the average number of seamen required in the safe and ordinary navigation of registered, enrolled, and licensed vessels of the United States, basing such schedule upon the differences in rig, tonnage, and kind of traffic;" and, after its preparation, to assess and collect hospital-dues from the master or owner of the vessel upon the average number of seamen as set forth in the schedule. The Department has made every effort to prepare such a schedule as would meet the requirements of the law, but has found it to be impossible. It is therefore recommended that the provision be repealed. The details of the subject will be found in the report of the Surgeon-General.

The recommendations made in the last annual report relative to statutory provisions for appointments and promotions in the medical corps of this service, and for the compulsory physical examination of seamen, are respectfully renewed.

Provision should be made for the return to the marine-hospital fund of the proceeds of sale of all property originally purchased for or produced from it, such proceeds being now covered into the Treasury. There is now in the Department, as a special deposit, \$1,309 14, unclaimed money of deceased seamen, and there are in the several custom-houses and marine-hospitals unclaimed effects, such as watches, jewelry, and clothing, of considerable value. It is recommended that the sale of such effects be authorized, and that the proceeds thereof, and the unclaimed money referred to, be permitted to be carried to the credit of the marine-hospital fund.

The Secretary recommends that a National Snug Harbor or Sailors'

Home be established by law for the reception of destitute American seamen incurably diseased or permanently disabled in the line of duty, and placed under the direction of the Marine-Hospital Service. After provision is made for a site and buildings, it is believed that the ordinary expenses could be met from the marine-hospital fund. The physical examination of seamen, before allowing them to be shipped, would, by keeping disabled men out of the merchant service, rid the hospitals of hundreds, and thus leave a surplus for this purpose. The number of American seamen in our vessels is diminishing from year to year, and their places are filled by foreigners. A provision for the support of seamen in disease and old age, it is believed, will greatly increase the enlistment of native citizens in the merchant marine.

As a measure in the interest of American commerce, it is also recommended that the "advance wages," authorized by section 4532 of the Revised Statutes, be abolished; and the form of "articles of agreement," in section 4612, be amended accordingly.

It is recommended that section 4569, Revised Statutes, which requires a medicine-chest to be kept on merchant vessels, be amended by providing that each vessel, before clearance, shall present, to the collector of customs, a certificate of an officer of the Marine-Hospital Service that the medicine-chest is properly supplied.

It is also recommended that an appropriation be made, to be expended under the direction of this service, for the relief of seamen shipwrecked in places beyond the reach of the Life-Saving Service.

#### LIFE-SAVING SERVICE.

The past year appears to have been remarkable in the operations of the Life-Saving Service. The season was marked by numerous storms of great severity, resulting in disaster to a larger number of vessels upon our shores than in any previous year since the organization of the service, and severely testing the ability and fidelity of its crews, and the methods employed for the saving of life. The gales upon the lakes were especially violent, the consequent casualties to shipping within the reach of this service being one hundred and thirty-six, but of the nine hundred and seven lives endangered in these disasters only a single one was lost.

On the Atlantic coast, also, the storms were very destructive to shipping. The number of lives imperilled in disasters within reach of the service was one thousand and forty-nine, of which only eight were lost.

The whole number of disasters to vessels during the year, reported by the district officers, is three hundred. The number of persons on board these vessels was nineteen hundred and eighty-nine, of whom



nineteen hundred and eighty were saved, and nine lost. Succor was given at the stations to four hundred and fifty persons. The number of days' relief afforded was twelve hundred. The estimated value of property involved was \$3,811,708, of which \$2,619,807 was saved, and \$1,191,901 was lost. The number of vessels totally lost was sixty-seven.

It may be proper to call special attention to the loss of six men of the crew at the Point aux Barques station, a crew distinguished for many brilliant rescues, the members of which, after having this year saved nearly a hundred lives, all perished, except one, in a gallant effort to reach a distressed vessel.

Six new stations have been completed and put in operation during the year upon the Gulf coast, involving the organization of a new life-saving district, designated the eighth. For the remaining stations authorized by Congress to be erected, plans and specifications are ready, and they will be constructed as soon as practicable.

The advance of wages in some localities renders it difficult to retain in the service the trained men, who now render it so efficient, and who cannot easily be replaced. It is recommended, therefore, that the General Superintendent be allowed to fix the compensation of the surfmen, employed at the several stations within defined limits.

Attention is invited to the recommendations of the Superintendent, in his annual report, in relation to increasing the number of stations, to supplying draught-horses for stations where they cannot be readily obtained in emergencies, for the employment of an additional man in each crew, and for additional apparatus at the stations. A bill, in which provision is made for most of these objects, is now pending, and deserves the attention of Congress.

It is worthy of remark that the successes of the service have, during the past year, excited attention abroad, and that the Department has been solicited for aid in introducing the American system into foreign countries.

#### NATIONAL BOARD OF HEALTH.

The National Board of Health has submitted to the Secretary of the Treasury its annual report of operations, for transmission to Congress, according to the requirement of the act of June 8, 1879.

It appears that the expenditures of the board for the year ended September 30, 1880, amounted to \$266,762 16. While the act provides that the appropriation made by said act shall be disbursed under the direction of the Secretary of the Treasury, on estimates made by the National Board of Health, to be approved by him, no further duty devolves upon the Secretary as to such disbursements than to decide

whether the requisitions made by the board are for purposes within the provisions of law making the appropriation. A large proportion of the amount expended appears to have been used by the board under section third of said act, in co-operating with and aiding State and municipal boards of health in the execution and enforcement of the rules and regulations of such boards to prevent the introduction of contagious or infectious diseases into the United States from foreign countries or into one State from another.

The several amounts for these and other purposes, and for the general expenditures of the board, having been drawn by the board upon requisitions specifying in general the legal and proper purposes for which the funds were to be used, neither the Secretary nor the accounting officers of the Treasury have deemed it their duty to exercise any supervision over the details of the various expenditures of the amounts thus drawn from the Treasury. The Secretary has no reason to believe, however, that the funds have not been properly expended.

#### PUBLIC BUILDINGS.

The Supervising Architect reports the progress of work on the public buildings as generally satisfactory, but, in several instances, suspension of work has been caused by insufficient appropriations.

It appears that twenty-one buildings are now in process of construction, of which nine are approaching completion. The estimated amount of the appropriations available for their completion is \$217,000. The buildings in the cities of Albany, N. Y., Boston, Cincinnati, New York, (barge office,) Philadelphia, St. Louis, and Topeka, are so advanced that it is estimated that a further appropriation of \$3,700,000 will complete them. Comparatively little progress has been made on the remaining buildings.

It is respectfully recommended that Congress, having fixed upon such an amount as it may deem best to expend on public buildings, shall, out of that sum, appropriate sufficient to complete the nine buildings above referred to, and make liberal appropriations for the work on the buildings in the cities named. It is also recommended that, in authorizing the erection of new buildings, consideration be given only to those for localities where the rental paid for accommodations for Government offices, represents a fair percentage on the cost of the construction of suitable buildings. It would seem to be better, and it is certainly more economical, to appropriate freely for buildings in process of construction, than to commence too great a number for the amount appropriated.

The accompanying report of the Supervising Architect will furnish

full details of the progress made in the buildings now in process of erection.

#### REVENUE MARINE.

The Revenue Marine has performed efficient service during the past year. Its vessels have cruised an aggregate of 265,763 miles, and its officers have boarded and examined 36,318 vessels, of which 23,243 were American, and 13,075 foreign. Of the number examined, 3,556 were found to have violated the law in some particular, and were seized or reported to the proper authorities.

The expenses of the service for the year were \$845,333 74.

Under the provisions of section 1536 of the Revised Statutes, vessels of the Revenue Marine, in addition to their regular duties, are yearly charged with cruising during the inclement season, for the relief of distressed mariners. In the performance of this duty one hundred and fourteen distressed merchant-vessels, representing with their cargo a value of \$2,011,509, and having on board nine hundred and thirty-five persons, have been assisted during the past year, and sixty-five persons have been rescued from drowning.

Besides the regular duties which officers of the Revenue Marine have performed under the law, in connection with the Life-Saving Service, its vessels have rendered frequent assistance in transporting persons and supplies for that service. They have also rendered special services to the Light-house Establishment and to the United States Commissioner of Fish and Fisheries.

It is recommended that an appropriation be made for the construction of two revenue-vessels to be stationed on the southern coast, and for the rebuilding of the revenue-steamer "Fessenden," now laid up as unseaworthy at Detroit. For these purposes the sum of \$225,000 has been included in the estimates.

Under the provisions of the acts of May 31 and June 16, last, the revenue-steamer "Corwin" was dispatched from San Francisco to cruise within the Arctic ocean and on the northern coasts of Alaska, to assist in the enforcement of the laws governing that Territory, and to relieve the officers and crews of the whaling-barks "Mount Wollaston" and "Vigilant," which are supposed to have been shipwrecked in that region. The cruise of the "Corwin" has resulted in the seizure of two vessels engaged in illicit traffic, the discovery and location of important coal deposits on the coast of Alaska within the Arctic ocean, the collection of valuable ethnological statistics, and the making of useful hydrographic surveys and soundings, but no trace was found of the missing whalers.

## STEAMBOAT INSPECTION.

During the past year 4,536 steam-vessels have been inspected, of an aggregate tonnage of 1,121,808 tons, and licenses have been issued to 16,661 officers—an increase over last year of 248 vessels, of 29,454 tons, and of 1,449 officers.

The total receipts, from the inspection of vessels and licensing of officers, were \$282,468 96, and the total disbursements for salaries, and travelling and other expenses, were \$212,849 88, leaving a surplus of receipts over expenditures of \$69,619 08.

There were carried during the year some 220,000,000 passengers, of which number 103 lost their lives by various casualties.

The Board of Supervising Inspectors, at its meeting in January last, adopted a rule relative to the examination of pilots for color-blindness, which requires that, before granting or renewing a license to any person to act as a pilot, inspectors shall satisfy themselves that the applicant can properly distinguish the colored lights used as signals on steam-vessels. To carry this rule into effect, it was deemed advisable that such examinations should be made by the surgeons of the Marine-Hospital Service, and free of charge.

Considerable opposition to this rule was at first manifested, but as every pilot who successfully passed the required examination became its advocate, its opponents now consist of a portion only of the rejected applicants, some, even of these, admitting its propriety, and their own defective vision in regard to colors.

It is believed that the rule referred to will have a tendency to decrease night-collisions between steamers and other vessels.

The Supervising Inspector-General, in his annual report, suggests several amendments to the steamboat laws, deemed by him necessary to further increase their efficiency, which are commended to the consideration of Congress.

## ALASKA.

In the last report of this Department attention was called to the necessity of establishing some form of government for Alaska. A form of bill to accomplish this end was subsequently prepared in this Department and transmitted to the House of Representatives for consideration, but thus far no final action on the subject has been taken. The adoption of some simple form of government to protect persons and property, to provide for the record of wills and transfers of property, and possibly to extend the land laws of the United States over the main-land, would encourage immigration and tend to develop the resources of the Territory. A peaceful condition of affairs has, however, prevailed in Alaska during the past year, owing largely to the

presence of a naval vessel at Sitka, and the cruise, already referred to, of the revenue-cutter "Corwin" to its northern and western waters. The inhabitants, except those of the Seal Islands, depend to a large extent for a livelihood upon the traffic in furs obtained from the sea-otter and other valuable fur-bearing animals; and the oft-repeated visits of white men to the haunts of these animals, using fire-arms in hunting them, must soon result in their extermination and the reduction of the natives to extreme poverty. The commander of the "Corwin," who visited St. Lawrence Island, reports the death by starvation of over four hundred of the natives, from neglect to make proper provision for the winter, owing to their use of rum, furnished them by the illicit traders.

To protect the sea-otter hunting-grounds and suppress illicit traffic in fire-arms and whiskey, as well as to guard the extensive coast-line against smuggling, there should be provided a steam-vessel especially adapted to cruising in Alaskan waters. The recommendation heretofore made for legislative action to that end is accordingly renewed.

The captain of the revenue-cutter reports the presence of an increased number of seals at the Seal Islands the past season.

The Alaska Commercial Company have taken during the past year the maximum number of seals allowed by law under their lease.

#### DISTRICT OF COLUMBIA.

The net expenditures on account of the District of Columbia for the fiscal year 1880, were \$3,272,384 63. The revenues deposited in the Treasury for the same period were \$1,809,469 70.

From December 1, 1879, to June 30, 1880, the bonded indebtedness has been reduced, by operation of the sinking-fund, \$200,423 33; and the annual interest-charge upon the District debt has been reduced \$8,827 66. Since the offices of the commissioners of the sinking-fund of the District of Columbia were abolished, and their duties and powers transferred to the Treasurer of the United States by the act of Congress of June 11, 1878, the principal of the funded debt has been reduced \$618,750, and the annual interest-charge has been reduced \$38,981 77.

Under existing law the sinking-fund of the three-sixty-five loan of the District must be invested in bonds of that loan, which do not mature until August 1, 1924; while District bonds bearing higher rates of interest, in which investments can more profitably be made, mature at earlier dates, from time to time. It is recommended, therefore, that authority of law be given for the investment of that sinking-fund in any bonds of the District of Columbia.

## PUBLIC SERVICE.

In closing his annual report the Secretary takes pleasure in bearing testimony to the general fidelity and ability of the officers and employés of this Department. As a rule they have by experience and attention to duty become almost indispensable to the public service. The larger portion of them have been in the Department more than ten years, and several have risen by their efficiency from the lowest-grade clerks to high positions. In some cases their duties are technical and difficult, requiring the utmost accuracy; in others, they must be trusted with great sums, where the slightest ground for suspicion would involve their ruin; in others, they must act judicially upon legal questions affecting large private and public interests, as to which their decisions are practically final. It is a just subject of congratulation that, during the last year, there has been among these officers no instance of fraud, defalcation, or gross neglect of duty. The Department is a well-organized and well-conducted business office, depending mainly for its success upon the integrity and fidelity of the heads of bureaus and chiefs of divisions. The Secretary has therefore deemed it both wise and just to retain and reward the services of tried and faithful officers and clerks.

During the last twenty years the business of this Department has been greatly increased, and its efficiency and stability greatly improved. This improvement is due to the continuance during that period of the same general policy, and the consequent absence of sweeping changes in the public service; to the fostering of merit by the retention and promotion of trained and capable men; and to the growth of the wholesome conviction in all quarters that training, no less than intelligence, is indispensable to good service. Great harm would come to the public interests should the fruits of this experience be lost, by whatever means the loss occurred. To protect not only the public service, but the people from such a disaster, the Secretary renews the recommendation made in a former report, that provision be made for a tenure of office for a fixed period, for removal only for cause, and for some increase of pay for long and faithful service.

The several reports of the heads of offices and bureaus are herewith respectfully transmitted.

JOHN SHERMAN,  
*Secretary.*

To Hon. S. J. RANDALL,  
*Speaker of the House of Representatives.*



## TABLES ACCOMPANYING THE REPORT.

**TABLE E.—STATEMENT of OUTSTANDING PRINCIPAL of the PUBLIC DEBT of the UNITED STATES on the 1st of January of each year from 1791 to 1843, inclusive, and on the 1st of July of each year from 1844 to 1880, inclusive.**

Year.	Amount.
Jan. 1, 1791	\$75,463,476 52
1792	77,227,024 66
1793	80,352,634 04
1794	78,427,404 77
1795	80,747,587 39
1796	83,762,172 07
1797	82,064,479 33
1798	79,228,529 12
1799	78,408,669 77
1800	82,976,294 35
1801	83,088,050 80
1802	80,712,632 25
1803	77,054,686 30
1804	86,427,120 88
1805	82,312,159 50
1806	75,723,270 66
1807	69,218,398 64
1808	65,196,317 97
1809	57,023,192 09
1810	53,173,217 52
1811	48,005,587 76
1812	45,209,737 90
1813	56,962,827 57
1814	81,487,846 24
1815	90,833,660 15
1816	127,334,933 74
1817	123,491,965 16
1818	103,466,633 83
1819	95,529,648 28
1820	91,015,566 15
1821	89,987,427 66
1822	93,546,676 98
1823	90,875,877 28
1824	90,269,777 77
1825	83,788,432 71
1826	81,054,059 99
1827	73,987,357 20
1828	67,475,043 87
1829	58,421,413 67
1830	48,565,406 50
1831	39,123,191 68
1832	24,322,235 18
1833	7,001,698 83
1834	4,760,082 08
1835	37,733 05
1836	37,513 05
1837	336,957 83
1838	3,308,124 07
1839	10,434,221 14
1840	3,573,343 82
1841	5,250,875 54
1842	13,504,480 73
1843	20,601,226 28
July 1, 1843	32,742,922 00
1844	23,461,652 50
1845	15,925,303 01
1846	15,550,202 97
1847	38,826,534 77
1848	47,044,362 23
1849	63,061,858 69
1850	63,452,773 55
1851	68,304,796 02
1852	66,193,341 71
1853	59,803,117 70
1854	42,242,222 42
1855	35,586,956 56
1856	31,972,537 90
1857	28,009,831 85
1858	44,911,881 03
1859	58,496,837 88
1860	64,842,287 88
1861	90,580,873 72
1862	524,176,412 13
1863	1,119,772,138 63

TABLE E.—STATEMENT of OUTSTANDING PRINCIPAL of the PUBLIC DEBT, &c.—Continued.

Year.	Amount.
July 1, 1864.....	1, 815, 784, 370 57
1865.....	2, 680, 647, 869 74
1866.....	2, 773, 236, 173 69
1867.....	2, 678, 126, 103 87
1868.....	2, 611, 687, 851 19
1869.....	\$2, 588, 452, 213 94
1870.....	2, 480, 672, 427 81
1871.....	2, 353, 211, 332 32
1872.....	2, 253, 251, 328 78
1873.....	*2, 234, 482, 993 20
1874.....	*2, 251, 690, 468 43
1875.....	*2, 232, 284, 531 95
1876.....	*2, 180, 395, 067 15
1877.....	*2, 205, 301, 392 10
1878.....	*2, 256, 205, 892 53
1879.....	*2, 349, 567, 482 04
1880.....	*2, 120, 415, 370 63

\* In the amount here stated as the outstanding principal of the public debt are included the certificates of deposit outstanding on the 30th of June, issued under act of June 8, 1872, amounting to \$31,720,000, in 1873; \$58,760,000, in 1874; \$58,415,000, in 1875; \$32,840,000, in 1876; \$54,960,000, in 1877; \$46,755,000, in 1878; \$30,370,000 in 1879, and \$14,465,000, in 1880, for which a like amount in United States notes was on special deposit in the Treasury for their redemption, and added to the cash balance in the Treasury. These certificates, as a matter of accounts, are treated as a part of the public debt, but, being offset by notes held on deposit for their redemption should properly be deducted from the principal of the public debt in making comparison with former years.

STATEMENT of the PUBLIC DEBT, including ACCRUED INTEREST thereon, less cash in the Treasury on the 1st day of July of each year, from July 1, 1869, to July 1, 1880, compiled from the published monthly debt-statements of those dates.

Years.	Outstanding prin- cipal.	Accrued inter- est.	Cash in the Treasury.	Debt less cash in the Treasury.
July 1, 1869.....	*\$2, 597, 722, 963 37	\$47, 447, 310 79	\$156, 167, 813 58	\$2, 489, 002, 480 58
1870.....	*2, 601, 675, 127 83	50, 607, 556 52	265, 924, 084 61	2, 386, 358, 599 74
1871.....	2, 353, 211, 332 32	45, 036, 766 23	106, 217, 263 65	2, 292, 030, 834 90
1872.....	2, 253, 251, 328 78	41, 705, 813 27	103, 470, 798 43	2, 191, 486, 343 62
1873.....	2, 234, 482, 993 20	42, 856, 652 83	129, 020, 992 45	2, 147, 818, 713 57
1874.....	2, 251, 690, 468 43	38, 939, 087 47	147, 541, 314 74	2, 143, 088, 241 16
1875.....	2, 232, 284, 531 95	38, 647, 556 19	142, 243, 361 82	2, 128, 688, 726 32
1876.....	2, 180, 395, 067 15	38, 514, 004 54	119, 469, 726 70	2, 099, 439, 344 99
1877.....	2, 205, 301, 392 10	40, 882, 791 89	186, 025, 960 73	2, 060, 158, 223 26
1878.....	2, 256, 205, 892 53	36, 404, 551 37	256, 823, 612 08	2, 035, 786, 831 82
1879.....	2, 349, 567, 482 04	30, 792, 351 34	353, 152, 577 01	2, 027, 207, 256 37
1880.....	2, 120, 415, 370 63	22, 845, 547 59	201, 088, 622 88	1, 942, 172, 295 34

\* It will be noticed that there is a difference in the amounts represented by these two statements as the principal of the debt July 1, 1869, and July 1, 1870. This difference is explained thus: In the principal of the debt as shown by the monthly debt-statements of these dates, the bonds purchased for the sinking-fund and paid for from money in the Treasury, were included as a part of the outstanding debt and were also treated in the cash as a cash item, or asset, for the reason that at that time there was no authority or law for deducting them from the outstanding debt. Congress, by the sixth section of the act of July 14, 1870, directed that these bonds should be canceled and destroyed and deducted from the amount of each class of the outstanding debt to which they respectively belonged, and such deductions were accordingly made on the books of the department and in the table of the debt in the annual report.

# PAPERS

ACCOMPANYING

## REPORT OF THE SECRETARY OF THE TREASURY.

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### REPORT OF THE COMMISSIONER OF INTERNAL REVENUE.

TREASURY DEPARTMENT,  
OFFICE OF INTERNAL REVENUE,  
*Washington, November 24, 1880.*

SIR: I have the honor to submit the report of the Bureau of Internal Revenue for the fiscal year ended June 30, 1880, with accompanying tables, exhibiting in detail the receipts from each specific source of revenue by years and collection districts, together with additional facts and figures, showing the operations of the bureau during the months of July, August, September, and October, being the first four months of the current fiscal year.

I am glad to be able to bring to your attention the fact that since my last annual report still further improvement has been made in the condition of the internal-revenue service.

The efforts of the past four years for the suppression of the illicit manufacture and sale of spirits and tobacco have been substantially crowned with success. The frauds upon the revenue and the resistance to authority still existing are confined to a few localities, and I am of opinion that the hearty co-operation of all officers charged with the enforcement of the laws will, before the close of the present administration, have established the authority of the government for the collection of the taxes and the equal enforcement of its laws in all parts of the country.

The discipline, efficiency, and fidelity to duty of the officers of internal revenue have steadily improved; the manner in which they have enforced the laws has promoted the relations of harmony which should subsist between the tax-payer and the government, and I take pleasure in noting the fact of an almost universal disposition on the part of tax-payers to observe the laws and see them faithfully executed.

#### REDUCTION OF TAXATION.

The receipts of internal revenue for the fiscal year 1879 were \$113,449,621.38, showing an increase of \$2,795,458.01 upon the previous year. The receipts for the fiscal year 1880, in the face of the reduction of the tax on tobacco, were \$123,981,916.10, showing an increase of \$10,532,294.72. The receipts for the first four months of the present fiscal year amount to \$43,789,318.30, showing an increase over the corresponding period of last year of \$3,658,213.48. I know of no reason why this increase should not be maintained during the fiscal year, so that the total collections for the year from internal revenue taxes at the present rates would be \$135,000,000.

While the receipts from taxes are thus increasing in amount, the demands upon the Treasury are being lessened by the reduction of the public debt, and of the annual interest charge. It is probable, therefore, that Congress will be disposed to relieve the people from some of the internal-revenue taxes, and if such a reduction is to be made, I respectfully suggest the following list of taxes collected during the fiscal year 1880 for the consideration of the law-making power:

Bank checks .....	\$2, 270, 421 00
Friction matches .....	3, 561, 300 00
Patent medicines or preparations, perfumery, cosmetics, &c. ....	1, 836, 673 22
Bank deposits .....	2, 347, 568 07
Savings-banks deposits .....	163, 207 36
Bank capital .....	811, 436 48
Total .....	10, 990, 606 13

In the event it is deemed advisable to take the tax off matches, patent medicines, perfumery, &c., due consideration should be had to the fact that large stocks of these articles, tax paid, are now in the hands of the trade, and that a very serious reduction in their value, especially of matches, would result if the tax were taken off suddenly, and articles manufactured free of tax were brought into competition with those upon which the existing taxes had been paid. In my opinion an act abolishing these taxes should not go into effect earlier than, say three months from its passage.

The same may be said in regard to check stamps. Considerable stocks of stamped checks are now in the hands of individuals, banks, and bankers, upon which the stamps have been imprinted. I think it would be wise that the operation of the repeal should be delayed at least three months, so as to give time for the use of these stamps.

Whenever the interests of the government will allow it, I think it will be wise to confine internal-revenue taxation to spirits, malt liquors, tobacco, snuff, cigars, and special taxes upon the manufacturers and dealers in these articles. I am of opinion that reliance can be placed upon receiving the sum of \$124,000,000 annually from these sources, which sum would gradually increase with the increase of population, but which would probably be subjected to diminution upon a recurrence of hard times.

In considering the question of relieving patent medicines from internal revenue taxes, it should be understood that many of the articles put upon the market and taxed as medicinal bitters are used as a beverage. Persons engaged in the sale of such articles are not required to pay special taxes as retail dealers in liquors, so that if the articles were relieved from taxation medicinal bitters would be sold everywhere without paying any internal-revenue tax whatever.

In passing upon the right of these various medicated bitters to be taxed as such, and sold without payment of the special tax as retail liquor dealers, the office is often seriously embarrassed to find the exact line between a medicinal bitter liable to stamp tax and a compound liquor subject to be sold only as a beverage. In my opinion it would be wise to continue the stamp tax upon all medical bitters containing more than 20 per cent. of proof spirits.

The tax upon savings banks, in my judgment, should be removed, or the whole legislation upon the subject of taxing savings banks should be modified and made more equitable; and there would seem to be no just ground for continuing the tax upon the capital and deposits of banks and bankers if it is found that the revenues are sufficient without it.

## ASSESSMENTS ON CIRCULATING NOTES.

The assessments on circulating notes of corporations and individuals under sections 3412 and 3413 United States Revised Statutes, and sections 19 and 20 of the act of February, 8, 1875, amounted, during the year ended June 30, 1880, to \$461,597.82, an increase of \$452,355.20 over those made during the preceding year. The chief motive for issuing the notes upon which these assessments were made was unquestionably to supplement an insufficient capital or to bolster up the waning credit of the firms or corporations making the issues. The large increase in these assessments clearly indicates the disposition of individuals and corporations to flood the country with an insecure "shinplaster" circulation. The existing laws of the United States seem to constitute the only breakwater for the protection of the people against an inundation of every imaginable character of individual and corporate circulating notes designed to take the place of money. In my judgment those laws should be maintained upon the statute book.

## RESISTANCE TO ENFORCEMENT OF THE LAWS.

By reference to the table on page 24, it will be seen that during the last four years and four months, 4,061 illicit distilleries have been seized, 7,339 persons have been arrested for illicit distilling, 26 officers and employés have been killed and 57 wounded, in the enforcement of the internal-revenue laws. During the past sixteen months 1,120 stills have been seized, 1,265 persons arrested, and 10 officers wounded in the enforcement of the laws. While the number of stills seized and persons arrested since my last annual report is very large, I am satisfied that there will be a decrease henceforward in the number of such seizures and arrests.

In January of the present year a combined movement was made, by armed bodies of internal-revenue officers, from West Virginia southward through the mountains and foothills infested by illicit distillers, which resulted in the seizure of a number of illicit distilleries, and the arrest of many persons engaged therein. The effect of this movement was to convince violators of the law that it was the determination of the government to put an end to frauds and resistance to authority, and since that time it has been manifest to all well-meaning men in those regions of country that the day of the illicit distiller is past. Public sentiment has been gradually setting in against these frauds, and I feel assured that if continued efforts are made for the enforcement of the laws the taxes upon whisky and tobacco can soon be collected in the districts where frauds have been so rife without the use of armed posses of men.

For the purpose of preventing old offenders from resuming the business of illicit distilling, I have deemed it advisable to maintain a special force of deputies in many of the districts to police the districts and seize illicit distilleries. These officers are armed and move in small posses so as to deter resistance. They are instructed to establish friendly relations with the people and to encourage the observance of the laws. This system has worked satisfactorily and beneficially, and except in the second district of Georgia there has been very little disturbance during the past few months.

## ENCOURAGEMENT OF LEGAL DISTILLERIES.

It has been the policy of this office to encourage the establishment of legal distilleries in those collection districts where illicit distillation has



heretofore prevailed, and there are now 469 licensed grain distilleries in those districts against 380 in 1879, and 177 in 1878. I have felt that if the manufacture of whisky was to be carried on at all in this section of country it was much better that it should be done openly and in full compliance with the requirements of law rather than secretly in violation and defiance of law, and with the demoralizing influences of dishonesty, turbulence, outlawry, and murder, which invariably prevail in a community where illicit distilling is carried on unchecked. The policy thus adopted has worked well. In every county where legal distilleries have been established in any number, illicit distilling has almost entirely ceased, violent resistance to law has become almost unknown, and there has been a large increase of revenue.

It must be understood that many of the legal distilleries thus established have no greater capacity than ten gallons per day, and that it is necessary for the protection of the rights of the government to have a storekeeper and gauger assigned to each distillery. It is thus obvious that the expense of collecting the taxes upon the spirits so made is very heavy, and necessarily increases the estimates for this year for the pay of storekeepers and gaugers. It is, however, unquestionable that it is far preferable to incur this expenditure to secure the collection of the revenue and an orderly observance of the laws than to spend large sums of money in the employment of raiding parties for the seizure of illicit distilleries and the arrest of illicit distillers. So long as the government looks to the tax upon distilled spirits for a large proportion of its revenues, it is just and right that every producer of distilled spirits shall be held to the payment of his legal tax, and such appropriations should be made as will enable the executive branch of the government to enforce the tax law so as to collect the revenues justly from all alike.

I have the honor to earnestly recommend that the appropriation asked for for this service be granted.

#### PROTECTION OF REVENUE OFFICERS.

I again recommend additional legislation for the protection of the lives and persons of officers of the United States from the unlawful assaults of those who resist their authority, and refer to the remarks on this subject in my last annual report, page v.

#### FRAUDS IN THE MANUFACTURE OF VINEGAR.

I respectfully direct attention to House bill No. 6460, entitled "A bill to regulate the manufacture of vinegar by the alcoholic vaporizing process," now pending in Congress, and urgently request that the same be taken up and passed into law at the earliest practicable moment. I state without hesitation that the provisions of section 5 of the act of March 1, 1879, authorizing the use of a process for the vaporizing of alcohol in the manufacture of vinegar, has opened the door to frauds upon the revenue which cannot be guarded against successfully under existing laws. While the great majority of manufacturers of vinegar by this process are, no doubt, following a legitimate and honest business, I am convinced that there are many who have engaged in the business for the express purpose of defrauding the government out of its tax upon distilled spirits. As was shown before the Committee on Ways and Means, of the House of Representatives, at its last session, it is easy for a manufacturer of vinegar by this process to produce low-wines of 50 or 60 per cent. strength. As there are no storekeepers or



other government officers connected with these establishments, it is obvious that these low-wines may be removed and sold as distilled spirits without the payment of the tax if the vinegar manufacturer sees fit to do so. The law authorizing the vaporizing of alcohol by vinegar manufacturers should either be repealed, or else a government storekeeper should be stationed at each vinegar factory using this process, the expense of such storekeeper to be borne by the manufacturer.

#### EMPLOYÉS ON THE STAMP ROLL.

Sections 321, 3238, 3312, 3328, 3330, 3341, 3369, 3395, 3445, and 3446 of the United States Revised Statutes charge the Commissioner of Internal Revenue with the duty of procuring and issuing appropriate stamps for all internal-revenue taxes imposed by law. Most of these stamps are now being produced by the Bureau of Engraving and Printing. They are delivered to the Commissioner of Internal Revenue, and are by him issued to collectors of internal revenue, and sold to tax-payers.

The work of issuing all stamps, except stamps on bank checks and tin-foil tobacco wrappers, directly from the Internal Revenue Bureau, was commenced in September, 1877, since which time nearly \$334,000,000 worth of stamps have been sent out. The accounting officers of the Treasury Department charge to the Commissioner the stamps delivered to him by the Bureau of Engraving and Printing, and credit him with all stamps properly issued and sold. The honorable First Comptroller, who passes upon these accounts, has expressed to the Commissioner the opinion that he (the Commissioner) is personally liable to the government for the safe-keeping and proper issue of these stamps.

When it became necessary to employ a force to perform the work of receiving and issuing these stamps the question arose as to who should exercise that power, the law making the appropriation for dies, paper, and stamps requiring that the sum appropriated should be expended "under the direction of the Secretary of the Treasury." Upon consultation between the Secretary of the Treasury and the Commissioner of Internal Revenue it was then decided that the Commissioner was the proper officer to employ that force. The number of persons to be employed and the salaries to be paid them were fixed by the direction and with the approval of the honorable Secretary. The Commissioner then proceeded to employ the necessary force, and from month to month the pay-rolls for the persons so employed were passed by the accounting officers and paid without question.

On the 28th of June last, the following letter was received:

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,  
Washington, D. C., June 28, 1880.

SIR: I am in receipt of the letters of the acting Commissioner of the 24th and 26th instant, informing me of the employment of a messenger in your office, and of certain persons to be employed at East Pepperell, Mass., all to be paid from the appropriation for dies, paper, and stamps.

The legislative bill approved the 15th instant, provides that the appropriation for that purpose for the next fiscal year shall be expended under the direction of the Secretary of the Treasury. You will, therefore, please transmit to this office any recommendations which you may have for the employment of the persons named in the two above-mentioned letters, or for the employment of any other persons paid out of the above appropriations, and will notify them that their services will not be required on and after the first proximo, unless previously authorized by the Secretary.

Very respectfully,

JOHN SHERMAN,  
Secretary.

Hon. GREEN B. RAUM,  
Commissioner of Internal Revenue,

Under the instructions of this letter the persons employed upon the stamp-roll by authority of the Commissioner were discharged, and a majority of them were subsequently re-employed by direction of the Secretary of the Treasury. The effect of this letter was to divest the Commissioner of an authority which had been exercised by him for nearly three years under the sanction of the Secretary.

The principle seems to me well established that no officer shall be held pecuniarily responsible for the neglect or dishonesty of an employé in whose appointment he has no voice, and I respectfully submit that the sections of law above referred to impose such duties and confer such powers upon the Commissioner of Internal Revenue, taken in connection with his pecuniary responsibility for the custody of these stamps, as should carry with them authority to select and employ the persons engaged in the work of receiving, counting, caring for, and issuing said stamps. In coming to this conclusion I have duly considered the constitutional provision which authorizes Congress to empower the heads of departments to appoint inferior officers, and that section of the act above alluded to appropriating money for dies, paper, and stamps, which provides that the same "shall be expended under the direction of the Secretary of the Treasury." The persons employed upon this work are not "officers"; they are clerks, book keepers, counters, and messengers. And the statutory provision is, in my opinion, fully met by the Secretary directing the number of persons to be employed and fixing their pay, thus controlling the expenditure of the appropriation. Under the changed system persons who were regarded by the Commissioner as competent and experienced in their work and were satisfactory to him have been removed, and others without experience and unknown to the Commissioner have been substituted.

With the utmost respect to the honorable Secretary I will say that in my opinion this action is erroneous in principle and in law, and in my judgment should be revoked. The Commissioner of Internal Revenue should not be chargeable with the shortcomings of persons employed in the business of handling \$150,000,000 worth of stamps per annum without having the selection of such persons, and I respectfully recommend that if upon a further consideration of this question the honorable Secretary entertains a doubt as to the correctness of the positions above stated, legislation should be asked for to place the authority of selection and employment in the hands of the officer on whom rests the pecuniary responsibility for the conduct of the persons employed.

#### APPOINTMENT OF STOREKEEPERS, GAUGERS, AND TOBACCO INSPECTORS.

For about twelve years preceding June 30 last, under a plan adopted by Hon. Hugh McCulloch, Secretary of the Treasury, the correspondence with collectors of internal revenue and others in respect to the appointment and removal of storekeepers, gaugers, and tobacco inspectors was conducted by the Commissioner of Internal Revenue, and the appointments were made on his recommendation. This system was changed by the following circular:

TREASURY DEPARTMENT,  
OFFICE OF THE SECRETARY,  
Washington, D. C., June 30, 1880.

*To Collectors of Internal Revenue and others:*

On and after July 1, 1880, any application for appointment to the office of gauger, storekeeper, storekeeper and gauger, or inspector of tobacco in the internal-revenue service will be made to the Secretary of the Treasury, and in each case will be in the

handwriting of the applicant, and signed by him, stating his age, legal residence, where born, and service in the Army or Navy, if any. The application must be accompanied by testimonials as to character for sobriety, industry, and business habits.

Collectors of internal revenue will report to the Secretary of the Treasury whenever the necessities of the service require new appointments or removals of incumbents, giving the reasons therefor, and forwarding to this office the papers in each case.

Removals from office of any of the above-named officers will hereafter be made only by the Secretary of the Treasury.

JOHN SHERMAN,  
*Secretary.*

The correspondence in respect to these appointments and removals is now carried on by the Secretary of the Treasury through the Appointment Division of his office. Having observed the workings of the new system since its inauguration, I deem it my duty in the interest of the public service, to point out the reasons why, in my judgment, this work can be better done by the Commissioner of Internal Revenue.

By existing laws all the officers enumerated in this circular perform their duties under the general instruction of the Commissioner of Internal Revenue, to whom they make return of work done upon forms prescribed by him. In the case of storekeepers, they are assigned to duty by the Commissioner, and in the case of gaugers, their accounts are audited by him. Revenue agents, under the instructions of the Commissioner, constantly supervise the work of these officers and report upon the same, and periodically inspect them and report as to their capacity and fidelity to duty. No new distillery can be started without the approval of the Commissioner of Internal Revenue, and reports of the closing of distilleries are promptly made to him; a record is kept in his office of the assignment of all storekeepers and gaugers. There are in the Internal Revenue Bureau persons who are experts in the work of gaugers and storekeepers, and who are able to and do criticise their work so as to keep the Commissioner advised upon these matters. This condition of things enables the Commissioner of Internal Revenue to decide when it is proper to appoint new officers in a district, and also when an officer in consequence of neglect of duty or incapacity should be removed. These means of information are not in the Secretary's office.

It may be proper to say that the appointment clerk and his assistants frequently obtain verbal information from this office in regard to matters connected with the appointment and removal of officers of this class. This, however, is always in an informal way, no record being made of the matter on either hand.

I have not questioned and do not question the right of the Secretary to obtain information from such sources as he may deem proper upon which to make these appointments and removals, but it occurs to me that the officer who by law has charge of the general superintendence of the collection of the revenues and who has so much to do with the officers in question should be consulted as to the necessity of making appointments and the propriety of making removals.

The plan adopted by the foregoing circular was tried for a short time by Secretary McCulloch, with this exception, that he expressly invited the aid of the Commissioner in regard to removing incompetent persons from office, but the system was not found to work well and was abandoned.

I claim that the storekeepers and gaugers have during the past four years steadily improved in their knowledge of law and regulations, in diligence and fidelity in the performance of their duties, and in their pride in the service. This corps of officers for efficiency and discipline is

not excelled by any branch of the civil service, and this state of things is the outgrowth for the most part of the measures set on foot at this office for the improvement of the service. The same system of examination and inspection adopted for collectors' offices, with a similar grading according to a scale of merit, has been applied in the case of storekeepers and gaugers, and the result has been a laudable ambition on their part to excel in intelligence and efficiency in the discharge of their duties. It is obvious that the effect of this system will be lost, and that officers will be made indifferent to or independent of criticism or commendation by this office when it is understood that only on the recommendation of a collector will a removal be made.

In my judgment it would be wise for the honorable Secretary of the Treasury to reconsider this subject with a view to a modification of his present order.

#### IMPROVEMENTS IN THE PUBLIC SERVICE.

In administering the Internal Revenue Office during the past four years I have directed my efforts—

1st. To popularizing the internal revenue system of taxation, so that tax-payers everywhere would cheerfully observe the laws, and a healthy public sentiment would be aroused favorable to their enforcement.

2d. To break up frauds of every kind, especially the illicit manufacture and sale of spirits and tobacco, and thoroughly establish and maintain the supremacy of the laws of the United States.

3d. To correct abuses of administration, especially the institution of suits and prosecutions for trivial and technical violations of law.

4th. To bring into the public service honest, capable, and efficient men, to increase them in the knowledge of their duty as prescribed by law and regulations, and to stimulate a just spirit of emulation amongst officers in the performance of duty.

5th. To establish a more perfect and uniform system for the transaction of the public business by collectors in their offices and by their deputies in their divisions, and to insure strict accountability for the public funds.

6th. To secure a prompt and careful transaction of the public business in the Bureau of Internal Revenue, and so to dispose of such business as had accumulated during past years that the labor of the office might be directed to current work.

Some of the leading improvements in the public service which have been effected are hereinafter recapitulated.

#### RELATIVES IN OFFICE.

Upon an examination of the *personnel* of the internal revenue service, I deemed it advisable to issue to each collector the following circular, known as Circular Letter 44, which was approved by Hon. R. C. McCormick, Acting Secretary:

TREASURY DEPARTMENT,  
OFFICE OF INTERNAL REVENUE,  
Washington, August 17, 1877.

The reports of collectors, in reply to Circular No. 42, dated June 19, 1877, disclose the fact that in a number of districts the officers and employes appointed by collectors or upon their recommendation, are, to a large extent, related by blood or marriage to such collectors; or, if not so related, are related to each other, so that, in fact, the selection of officers and employes in many instances is confined to a few families, upon whom alone fall the responsibilities and emoluments of office.

I regard this condition of affairs as an abuse in administration, the continuance of

which is incompatible with the best interests of the public service, as greatly tending to a lax discipline, and to the condonation of irregularities.

For the purpose of rectifying this condition of things, collectors will observe the following rules in respect to the officers and employes of their respective districts:

First. Of persons related to a collector by blood or marriage, but one shall be retained in office.

Second. Of persons not related to a collector, but related to each other by blood or marriage, but one shall be retained in office.

Collectors will make the necessary recommendations for the appointment of gaugers, storekeepers, and storekeepers and gaugers, and change their force of deputies and clerks so as to have their respective forces conform to the foregoing rules.

All changes under this circular will take effect on or before the 1st day of October, 1877.

GREEN B. RAUM,  
*Commissioner.*

The principle of this circular has, I think, received the approbation of the public, and its enforcement has been beneficial to the service.

### EX PARTE DEPOSITIONS.

In my annual report for the year 1876, I recommended the passage of a law in regard to the taking of depositions for use in internal-revenue cases. No such act having been passed by Congress, and believing that the system which had long prevailed of deciding cases upon *ex parte* evidence should be changed, I issued the following circular:

TREASURY DEPARTMENT,  
OFFICE OF INTERNAL REVENUE,  
Washington, D. C., October 30, 1877.

In all claims for abatement, refunding, drawback, or reward for information, all applications for compromise, all contested questions as to claims of the government for taxes not assessed, and generally in all matters wherein additional testimony is required to be taken, no *ex parte* affidavit or deposition will be considered unless the same shall have been taken after due notice to the Commissioner as herein prescribed.

Such notice must state the time and place at which, and the officer before whom, the testimony will be taken; the name, age, residence, and business of the proposed witness, with the questions to be propounded to the witness, or a brief statement of the substance of the testimony he is expected to give.

The notice shall be delivered or mailed to the Commissioner a sufficient number of days previous to the day fixed for taking the testimony, to allow him, after its receipt, at least five days, exclusive of the period required for mail-communication with the place at which the testimony is to be taken, in which to give, should he so desire, instructions as to the cross-examination of the proposed witness.

Whenever practicable the affidavit or deposition should be taken before a collector or deputy collector of internal revenue, in which case reasonable notice should be given to the collector or deputy collector of the time fixed for taking the deposition or affidavit.

It will be observed that these regulations relate to affidavits and depositions additional to those presented with the claim or matter in question as now provided for under existing regulations.

The foregoing regulations are not intended to preclude the examination of witnesses before the Commissioner; and he also reserves to himself the right to receive and consider affidavits as to which previous notice has not been given where the reason for failure to give such notice shall appear to him to be sufficient, and also in other cases in which, from their exceptional character, or the character of the affidavit, he shall be satisfied that the rule should not be enforced.

These regulations shall apply to all matters of the character first above mentioned pending in this office on and after the first day of December next.

GREEN B. RAUM,  
*Commissioner.*

Approved:  
R. C. McCORMICK,  
*Acting Secretary.*

The enforcement of this circular has rendered the evidence upon which action is had in internal-revenue cases very much more definite and satisfactory than was practicable under the system previously prevailing.



## PROSECUTIONS FOR TECHNICAL VIOLATIONS OF LAW.

For the purpose of preventing the institution of suits and prosecutions for technical and trivial causes, I addressed to collectors of internal revenue the following letter:

TREASURY DEPARTMENT,  
OFFICE OF INTERNAL REVENUE,  
*Washington, April 25, 1878.*

SIR: The number of cases for violations of the internal-revenue laws that are placed upon the dockets of the courts throughout the country is so great, and the expenditure for the trial of these cases is so large, and in many courts, in consequence of the great number of cases, the delay in bringing cases to trial is so great, that it becomes a matter of great importance that the officers of the government should observe the utmost degree of care in bringing cases into court in view of the facts above stated, as well as the rights of the citizens accused.

You are therefore instructed, before reporting a case to the district attorney for prosecution, to examine into the same with the utmost degree of care, with a view of giving the district attorney such definite information in regard to the case as will enable him to determine the question of the propriety of instituting proceedings. It is not the wish of this office that trivial cases, or cases of a mere technical character, involving no loss to the government, and where no fraud has been committed or intended, should be dignified by being brought into court for prosecution.

On the other hand, where persons have knowingly and willfully violated the law with the evident intention of defrauding the government of its revenues, vigorous measures should be taken to bring the parties to trial and punishment.

Very respectfully,

GREEN B. RAUM,  
*Commissioner.*

Collectors have, for the most part, been guided by the spirit of this letter, and the number of improper suits and prosecutions, instituted apparently for the creation of costs only, has been very greatly diminished. The principles of this letter have recently been embodied in instructions to district attorneys and United States marshals with the approval of the honorable Secretary.

## EXAMINATION OF COLLECTORS' OFFICES.

In March, 1877, I adopted a plan of making quarterly examinations of the accounts of collectors with a view of establishing a more uniform system of transacting the public business, of requiring all the books and accounts to be properly written up to date, of securing rigid accountability for the public funds, and by these means of promoting the efficiency of the collectors and their subordinates. An official standard of a first-class office was established, as follows:

First. Where the officers are honest, capable, and faithful.

Second. Where the collector devotes his best energies to the proper organization and discipline of his clerical and division force, and uses every endeavor to collect all the taxes due the government.

Third. Where every subordinate manifests pride in his position, and ambition to excel in his line of duty.

Fourth. Where no errors or discrepancies are found in the cash or stamp account.

Fifth. Where all the entries are made before the close of each day's business, cash balanced, and books and packages of stamps sold from during the day verified.

Sixth. Where every possible effort is made to promptly dispose of each item on the lists.

Seventh. Where all bonds are properly executed, approved, recorded, and filed.

Eighth. Where the penalties are collected, compromise cases promptly reported, and money properly deposited.

Ninth. Where the office is furnished with a view to the preservation of public records, the facilitating of business, and in a manner suitable and becoming the purpose for which it is used.

Tenth. Where every record is completed to date, and is without erasures, blots, or any defacement.



Eleventh. Where the Internal-Revenue Record and the lists are bound, and letter-books and circulars indexed.

Twelfth. Where everything presents the appearance of a first-class business office.

Thirteenth. Where the deputies in charge of stamps are supplied with the proper records, their books, accounts, and stamps in perfect order, and *stamp* and *cash* account verified by the collector at least once each quarter.

The following requirement has recently been added :

Fourteenth. Where all required reports and returns are made to the office at Washington, and where there is no unnecessary delay in correspondence with that office.

An office in which all of these requirements are fulfilled is graded as No. 1. Failure to come up to the official standard in any one of these particulars results in the office being marked down at a lower grade. Experience has shown that these examinations have created a splendid *esprit de corps* in the service; and to-day, out of 126 collectors' offices, 119 are graded as first-class according to the official standard.

#### INSPECTION OF OFFICERS.

The system of inspecting officers established in 1877 was intended to more thoroughly create and diffuse a knowledge of internal-revenue laws and regulations amongst both officers and tax-payers, to establish a greater uniformity in the enforcement of the laws, and to place upon the files of this office the record of every officer connected with the service. It was believed that this system would prove an efficient school for the officers, and I am glad to say that my expectations have been more than realized.

The inspections of deputy collectors, taken in connection with their diary reports attached to their monthly accounts, give the collectors and this office an insight into the manner in which they perform their duties, and so with the storekeepers and gaugers the inspection reports taken in connection with their reports of work done enable the collectors and this office to form a proper estimate of the value of these officers to the service. The incompetent officer is soon discovered and the government is enabled to properly dispense with his services, while the diligent and faithful officer has a record in this office which can always be invoked in his behalf.

In connection with the reports of examinations and inspections the officers have been subjected to just criticism for shortcomings and have received commendation for diligence and efficiency.

An important part of the work of the internal-revenue service is the policing by deputy collectors of their respective divisions. To promote efficiency in this work the great majority of policing deputies have been relieved from the sale of stamps. A system has been introduced of making an annual allowance for traveling expenses to be accounted for by the deputy in his accounts. With the approval of the honorable First Comptroller deputy collectors have been required to render monthly pay accounts instead of quarterly, rendering with said accounts a diary report setting forth the work performed by them. These measures have secured a more thorough system of work on the part of division deputies.

#### GAUGING.

To secure greater efficiency and uniformity in the work of gaugers, competent experts have, from time to time, been detailed to visit the leading spirit-producing districts and inspect the gaugers and correct any errors of work into which they might have fallen. Gaugers have also been required in their reports of work done to give the length and

mean diameter of each package gauged, so that their work and calculations can be easily verified. This, added to certain improvements which have been made in the gauging instruments, has resulted in greatly increased accuracy in the work of gauging.

#### STOREKEEPERS.

The storekeepers have been greatly improved in diligence and efficiency by periodical inspections and by frequent visits from collectors and revenue agents.

#### CONDITION OF THE OFFICE.

It is gratifying to be able to state that the work of this office is now thoroughly in hand, and that the time of almost the entire force is exclusively devoted to the transaction of current business. The correspondence of the office receives prompt attention; accounts are adjusted without delay and forwarded to the accounting officers for audit and payment. The redemption of stamps and settlement of drawback claims are part of the current business. Claims for the abatement and refunding of taxes and offers in compromise receive the consideration of the office as soon as the proper proofs are filed. The books containing the accounts with the Bureau of Engraving and Printing, with collectors, and with tax-payers who purchase stamps directly from the office, are kept written up to date and the account of stamps on hand is daily carefully verified and balanced. The work in connection with the establishment and operation of distilleries, breweries, and tobacco and cigar manufactories is promptly and diligently performed.

For this satisfactory condition of the office, I desire to return my sincere thanks to the officers, clerks, and employes for their diligence, fidelity, and zeal in the performance of duty.

#### AMOUNTS COLLECTED AND ACCOUNTED FOR BY COLLECTION DISTRICTS.

Soon after the close of the fiscal year ended June 30, last, I caused the customary annual examination to be made of the records and accounts of each collector of internal revenue throughout the United States, for the purpose of ascertaining whether the public moneys collected had been duly accounted for. This examination disclosed the gratifying fact that during the past fiscal year \$123,981,916.10 of internal revenue taxes had been collected, and that every dollar had been paid into the Treasury. During the past four fiscal years, \$467,080,885 of taxes have been received by collectors of internal revenue, and the entire sum has been paid into the Treasury. All deficiencies which have occurred in the accounts of collectors during that period have been made good by payments into the Treasury. Fidelity in accounting for the public funds being one of the highest tests of the efficiency of officers intrusted with the collection of revenue and the disbursement of public money, the officers of internal revenue, judged by this rule, are entitled to a high rank in the public service; and I take pleasure in bearing testimony to the fact that, as a body of officers, it will be difficult to improve upon them in respect to integrity, intelligence, fidelity, and zeal in the performance of duty.

I append a statement of the collections made, by districts, during the past fiscal year, with the name of each collector and the amount collected and paid into the Treasury by him.

Collection districts.	Names of collectors.	Aggregate collections.
First Alabama.....	Louis H. Mayer.....	\$63, 254 41
Second Alabama.....	James T. Rapier.....	72, 003 97
Arizona.....	Thomas Cordis.....	26, 004 10
Arkansas.....	Edward Wheeler.....	198, 089 12
First California.....	William Higby.....	2, 437, 650 82
Fourth California.....	Amos L. Frost.....	345, 963 82
Colorado.....	James S. Wolfe.....	103, 250 54
First Connecticut.....	Joseph Selden.....	212, 856 33
Second Connecticut.....	David F. Hollister.....	243, 323 80
Delaware.....	John L. Pennington.....	41, 653 29
Florida.....	James McIntire.....	304, 398 21
Second Georgia.....	Dennis Egan.....	704, 590 58
Third Georgia.....	Andrew Clarke.....	223, 543 80
Idaho.....	Edward C. Wade.....	93, 530 26
First Illinois.....	Austin Savage.....	22, 003 54
Second Illinois.....	Jeel D. Harvey.....	2, 206, 614 85
Do.....	William B. Allen (late).....	45, 260 58
Do.....	W. S. Beaupré (acting).....	35, 203 08
Do.....	Lucien B. Crocker (present).....	152, 003 89
Third Illinois.....	Adam Nase (late).....	175, 830 81
Do.....	A. H. Hershey (acting).....	41, 903 41
Do.....	Alfred M. Jones (present).....	497, 446 96
Fourth Illinois.....	John Tillson.....	908, 112 83
Fifth Illinois.....	Howard Knowles.....	10, 804, 076 75
Sixth Illinois.....	John W. Hill.....	57, 203 42
Seventh Illinois.....	Jonathan Morrison.....	845, 000 92
Eighth Illinois.....	Jonathan C. Willis.....	900, 501 48
First Indiana.....	James C. Vetch.....	271, 781 80
Second Indiana.....	Will Cumback.....	2, 283, 802 61
Third Indiana.....	Frederick Baggs.....	977, 027 06
Fourth Indiana.....	Deles W. Minshall.....	1, 531, 203 81
Fifth Indiana.....	George Moon.....	102, 978 56
Sixth Indiana.....	John F. Wildman.....	85, 972 86
Seventh Indiana.....	Sewall S. Farwell.....	303, 114 74
First Iowa.....	James E. Simpson.....	207, 818 89
Second Iowa.....	John Connell.....	105, 050 34
Third Iowa.....	Lampson P. Sherman.....	118, 875 71
Fourth Iowa.....	John C. Carpenter.....	252, 784 01
First Kentucky.....	William A. Stuart.....	630, 123 04
Second Kentucky.....	James F. Buckner.....	2, 562, 114 03
Third Kentucky.....	Winfield S. Holden.....	2, 203, 204 82
Fourth Kentucky.....	Armsted M. Swope.....	1, 013, 072 23
Fifth Kentucky.....	William J. Landrum.....	204, 242 19
Sixth Kentucky.....	John E. Blaine.....	149, 637 80
Louisiana.....	Morris Marks.....	712, 040 65
Maine.....	Franklin J. Rollins.....	76, 767 87
Third Maryland.....	Robert M. Proud.....	2, 263, 203 80
Fourth Maryland.....	Daniel C. Bruce.....	120, 673 21
Third Massachusetts.....	Charles W. Slack.....	1, 202, 983 00
Fifth Massachusetts.....	Charles C. Dame.....	850, 147 57
Tenth Massachusetts.....	Edward R. Tinker.....	203, 521 93
First Michigan.....	Luther S. Trowbridge.....	1, 002, 764 17
Third Michigan.....	Harvey B. Rowson.....	226, 719 20
Fourth Michigan.....	Sluman S. Bailey.....	121, 700 28
Sixth Michigan.....	Charles V. De Land.....	153, 505 15
First Minnesota.....	Andrew C. Smith.....	107, 389 53
Second Minnesota.....	William Bickel.....	257, 300 11
Mississippi.....	James Hill.....	91, 233 50
First Missouri.....	Isaac H. Sturgeon.....	4, 000, 206 14
Second Missouri.....	Alonzo B. Carroll.....	61, 635 57
Fourth Missouri.....	Arthur C. Stewart (late).....	260, 484 03
Do.....	Rynd E. Lauder (present).....	72, 511 95
Fifth Missouri.....	David H. Budlong.....	118, 826 24
Sixth Missouri.....	Robert T. Van Horn.....	255, 929 55
Montana.....	Thomas P. Fuller.....	33, 714 17
Nebraska.....	Lorenzo Crounse.....	912, 734 86
Nevada.....	Frederick C. Lord.....	60, 455 19
New Hampshire.....	Andrew H. Young.....	278, 139 08
First New Jersey.....	William P. Tatem.....	214, 500 00
Third New Jersey.....	Culver Barclaw.....	266, 338 62
Fifth New Jersey.....	Robert B. Hathorn.....	3, 726, 909 19
New Mexico.....	Gustavus A. Smith.....	31, 850 93
First New York.....	James Freeland (late).....	784, 940 00
Do.....	Silas J. Boone (acting).....	847, 806 19
Do.....	Rodney C. Ward (present).....	1, 631, 606 17
Second New York.....	Marshall B. Blake.....	3, 190, 990 87
Third New York.....	Max Weber.....	5, 064, 296 32
Eleventh New York.....	Moses D. Stivers.....	132, 020 24
Twelfth New York.....	Jason M. Johnson.....	519, 719 06
Fourteenth New York.....	Ralph T. Lathrop.....	571, 102 97
Fifteenth New York.....	Thomas Stevenson.....	259, 026 63
Twenty-first New York.....	James C. P. Kincaid.....	309, 412 81
Twenty-fourth New York.....	John B. Strong.....	422, 407
Twenty-sixth New York.....	Benjamin De Voe.....	273, 48

Collection districts.	Names of collectors.	Aggregate collections.
Twenty-eighth New York .....	Burt Van Horn .....	\$946, 711 55
Thirtieth New York .....	Frederick Buell .....	1, 287, 401 54
Second North Carolina .....	Thomas Powers (late) .....	3, 705 87
Do .....	Elihu A. White (present) .....	54, 989 85
Fourth North Carolina .....	Isaac J. Young .....	925, 443 18
Fifth North Carolina .....	William H. Wheeler .....	911, 908 83
Sixth North Carolina .....	John J. Mott .....	457, 918 98
First Ohio .....	Amor Smith, jr .....	11, 556, 810 75
Third Ohio .....	Robert Williams, jr .....	1, 855, 043 19
Fourth Ohio .....	Robert P. Kennedy .....	512, 154 48
Sixth Ohio .....	James Pursell .....	633, 678 00
Seventh Ohio .....	Charles C. Walcutt .....	475, 976 33
Tenth Ohio .....	Clark Waggoner .....	1, 092, 853 40
Eleventh Ohio .....	Benjamin F. Coates .....	1, 425, 321 06
Fifteenth Ohio .....	Jewett Palmer .....	210, 324 75
Eighteenth Ohio .....	Charles B. Pettengill (late) .....	433, 327 97
Do .....	Worthy S. Streater (present) .....	323, 479 46
Oregon .....	John C. Cartwright .....	76, 981 70
First Pennsylvania .....	James Ashworth .....	2, 523, 444 87
Eighth Pennsylvania .....	Joseph T. Valentine .....	553, 173 83
Ninth Pennsylvania .....	Thomas A. Wiley .....	1, 064, 642 47
Twelfth Pennsylvania .....	Edward H. Chase .....	326, 321 92
Fourteenth Pennsylvania .....	Charles J. Bruner .....	190, 145 19
Sixteenth Pennsylvania .....	Edward Scull .....	191, 065 00
Nineteenth Pennsylvania .....	Charles M. Lynch .....	115, 837 50
Twentieth Pennsylvania .....	James C. Brown .....	88, 989 28
Twenty-second Pennsylvania .....	Thomas W. Davis .....	1, 184, 418 98
Twenty-third Pennsylvania .....	John M. Sullivan .....	632, 391 83
Rhode Island .....	Elisha H. Rhodes .....	210, 883 98
South Carolina .....	Ellery M. Brayton .....	111, 980 78
Second Tennessee .....	Joseph A. Cooper (late) .....	1, 788 72
Do .....	James M. Melton (present) .....	86, 809 90
Fifth Tennessee .....	William M. Woodcock .....	805, 306 00
Eighth Tennessee .....	Robert F. Patterson .....	110, 328 55
First Texas .....	William H. Sinclair .....	99, 255 52
Third Texas .....	Benjamin C. Ludlow .....	72, 722 20
Fourth Texas .....	Adam G. Malloy .....	61, 128 74
Utah .....	Ovando J. Hollister .....	74, 352 48
Vermont .....	Charles S. Dana .....	50, 545 74
Second Virginia .....	James D. Brady .....	806, 292 51
Third Virginia .....	Otis H. Russell .....	2, 054, 557 71
Fourth Virginia .....	William L. Fernald .....	1, 002, 952 34
Fifth Virginia .....	J. Henry Rives .....	1, 602, 624 13
Sixth Virginia .....	Beverly B. Botte .....	254, 982 89
Washington .....	James R. Hayden .....	27, 018 34
First West Virginia .....	Isaac H. Duval .....	308, 824 72
Second West Virginia .....	George W. Brown .....	61, 847 43
First Wisconsin .....	Irving M. Bean .....	2, 214, 102 88
Second Wisconsin .....	Henry Harnden .....	155, 505 90
Third Wisconsin .....	Albert K. Osborn (late) .....	23, 421 16
Do .....	Howard M. Kutchin (acting) .....	181, 294 80
Do .....	Charles A. Galloway (present) .....	8, 108 53
Sixth Wisconsin .....	Hiram E. Kelley .....	116, 083 43
Wyoming .....	Edgar P. Snow .....	15, 947 95
Total from collectors .....		116, 848, 219 80
Cash receipts from sale of adhesive stamps .....		7, 133, 696 30
Total receipts from all sources .....		123, 981, 916 10

## COST OF COLLECTION.

The total cost of collecting internal revenue in the United States for the fiscal year ended June 30, 1880, was as follows:

For salaries and expenses of collectors, including pay of deputy collectors, clerks, &c .....	\$1,798,954 61
* For salaries and expenses of revenue agents, surveyors of distilleries, gaugers, storekeepers, and miscellaneous expenses .....	1,955,000 00
For stamps, paper, and dies .....	423,558 15
For expenses of detecting and punishing violations of internal revenue laws .....	74,797 97
For salaries of officers, clerks, and employes in the office of Commissioner of Internal Revenue .....	253,330 00
<b>Total .....</b>	<b>4,505,640 73</b>

Being 3.63 per cent. of the total amount collected.

## ESTIMATED EXPENSES FOR NEXT FISCAL YEAR.

I estimate the expenses of the Internal Revenue Service for the fiscal year ending June 30, 1882, as follows:

For salaries and expenses of collectors .....	\$2,000,000
For salaries and expenses of thirty-five revenue agents, for surveyors, for fees and expenses of gaugers, for salaries of storekeepers, and for miscellaneous expenses .....	2,100,000
For dies, paper, and stamps .....	442,000
For detecting and bringing to trial and punishment persons guilty of violating the internal revenue laws, including payment for information and detection .....	100,000
For salaries of officers, clerks, and employes in the office of the Commissioner of Internal Revenue .....	253,330
<b>Total .....</b>	<b>4,895,330</b>

## SCALE OF SALARIES OF COLLECTORS.

The recommendations made for the salaries of collectors for the fiscal year ending June 30, 1881, are based upon an estimate of their probable collections according to the following scale, with the qualification that if the actual collections should vary from the amounts estimated, the salaries would be readjusted at the end of the fiscal year:

For collection of—

\$25,000 or less .....	\$2,000
25,000 to \$37,500—\$12,500 .....	2,125
37,500 to 50,000— 12,500 .....	2,250
50,000 to 75,000— 25,000 .....	2,375
75,000 to 100,000— 25,000 .....	2,500
100,000 to 125,000— 25,000 .....	2,625
125,000 to 175,000— 50,000 .....	2,750
175,000 to 225,000— 50,000 .....	2,875
225,000 to 275,000— 50,000 .....	3,000
275,000 to 325,000— 50,000 .....	3,125
325,000 to 375,000— 50,000 .....	3,350
375,000 to 425,000— 50,000 .....	3,375
425,000 to 475,000— 80,000 .....	3,500
475,000 to 550,000— 75,000 .....	3,625
550,000 to 625,000— 75,000 .....	3,750
625,000 to 700,000— 75,000 .....	3,875
700,000 to 775,000— 75,000 .....	4,000

\* This includes an estimated deficiency of \$135,000, being the expenses in excess of the amount appropriated.



\$775,000 to \$850,000—\$75,000.....	\$4,125
850,000 to 925,000— 75,000.....	4,250
925,000 to 1,000,000— 75,000.....	4,375
1,000,000 and upward.....	4,500

## OFFICIAL FORCE FOR FISCAL YEAR 1881.

The force connected with this bureau in the various districts throughout the United States is as follows:

One hundred and twenty-six collectors, who receive salaries as follows:

Twenty-nine.....	\$4,500	Four.....	\$3,125
Two.....	4,375	Seventeen.....	3,000
Five.....	4,250	Eight.....	2,875
Five.....	4,125	Nine.....	2,750
Two.....	4,000	Eight.....	2,625
One.....	3,875	Eleven.....	2,500
Three.....	3,750	Four.....	2,375
Two.....	3,625	Five.....	2,250
Four.....	3,500	One.....	2,125
Two.....	3,375	Two.....	2,000
Two.....	3,250		

There are also employed nine hundred and forty-nine deputy collectors, who receive salaries as follows:

One.....	\$2,100	One.....	\$1,025
Fourteen.....	2,000	Thirty.....	1,000
One.....	1,950	Six.....	950
Nine.....	1,900	Thirty-six.....	900
One.....	1,850	Two.....	850
Twenty-seven.....	1,800	Eight.....	800
Five.....	1,750	Two.....	775
Twenty-six.....	1,700	Two.....	750
Eight.....	1,650	Three.....	720
Fifty-four.....	1,600	Eight.....	700
Ten.....	1,550	Two.....	650
Eighty-six.....	1,500	One.....	640
Sixteen.....	1,450	Fifteen.....	600
One.....	1,425	Two.....	550
Two hundred and fifty-seven.....	1,400	Four.....	500
Twenty-six.....	1,350	One.....	475
One.....	1,325	One.....	450
Forty-nine.....	1,300	Three.....	400
Seventeen.....	1,250	Twenty.....	300
One.....	1,225	Five.....	250
Ninety-three.....	1,200	One.....	240
One.....	1,175	Thirteen.....	200
Twenty-one.....	1,150	Two.....	150
Thirty-eight.....	1,100	One.....	120
Four.....	1,075	One.....	100
Ten.....	1,050	Two.....	60

Also one hundred and seventy-nine clerks, messengers, and janitors, who receive salaries as follows:

One clerk.....	\$1,600	Fourteen.....	\$900
Eight clerks.....	1,500	One.....	550
Seven clerks.....	1,400	Five.....	500
Two clerks.....	1,350	One.....	480
Four clerks.....	1,300	Two.....	400
Twenty-six clerks.....	1,200	Two.....	300
Five clerks.....	1,150	One messenger.....	450
Sixteen clerks.....	1,100	Two messengers.....	300
Seventeen clerks.....	1,000	Four janitors.....	300
Twenty-seven clerks.....	900	One janitor.....	125
Eighteen clerks.....	800	Four janitors.....	100
Two clerks.....	720	One janitor.....	75
Five clerks.....	700	One janitor.....	52
Two clerks.....	670		



There are also employed 648 gaugers, who receive fees not to exceed \$5 per diem ; 945 storekeepers and gaugers, who receive not to exceed \$4 per diem ; 543 storekeepers, who receive not to exceed \$1 per diem (all of the foregoing officers are paid only when actually employed); and 56 tobacco inspectors, who receive fees to be paid by the manufacturers.

## SALARIES.

I have the honor to recommend that Congress appropriate, for the fiscal year ending June 30, 1882, the sum of \$254,880, as salaries for the following officers, clerks, and employes in this bureau :

One Commissioner, at.....	\$6,000
One deputy commissioner, at.....	3,500
Seven heads of division, at.....	2,500
One stenographer, at.....	1,800
Twenty-three clerks, class four, at.....	1,800
Twenty-six clerks, class three, at.....	1,600
Thirty-six clerks, class two, at.....	1,400
Twenty-one clerks, class one, at.....	1,200
Thirteen clerks, at.....	1,000
Fifty clerks, at.....	900
Four assistant messengers, at.....	720
Ten laborers, at.....	660

An aggregate of one hundred and ninety-three persons.

An increase in the salary of the deputy commissioner, and of the five heads of division, is recommended for the following reasons:

The law creating the office of deputy commissioner fixed his salary at \$3,500. The duties of the office are of great importance, and their faithful performance fully entitles the officer to that pay.

The law, creating the office of head of division states that there shall be seven heads of division, who shall receive each a salary of \$2,500. The appropriations for the years ending June 30, 1878, June 30, 1879, June 30, 1880, and June 30, 1881, allowed two heads of division at a salary of \$2,500 each, and five heads of division at a salary of \$2,250 each. There is no just ground for this discrimination; the officers fully earn \$2,500 each, and, in my judgment, should receive that amount.

An increase of \$1,550 over the appropriation for the present year will give the above-named officers the salaries to which they are entitled under the law.

REPORT OF WORK PERFORMED DURING THE FISCAL YEAR ENDED  
JUNE 30, 1880.*Division of Law.*

Offers in compromise received and briefed.....	1,097
Opinions prepared.....	1,062
Offers in compromise acted upon.....	1,121
Reward claims received and acted upon.....	494
Railroad cases adjusted.....	20
Orders for abatement of taxes issued.....	617
Claims for abatement of taxes disposed of.....	4,498
Amount of abatement claims allowed (uncollectible).....	\$194,923 38
Amount of abatement claims allowed (erroneous assessment).....	\$227,169 00
Amount of abatement claims rejected (uncollectible).....	\$10,220 08
Amount of abatement claims rejected (assessment claimed to be erroneous).....	\$538,599 81
Claims for refunding of taxes disposed of.....	620
Amount of refunding claims allowed.....	\$64,246 61
Amount of refunding claims rejected.....	\$141,673 29

*Division of Distilled Spirits.*

Returns and reports relating to distilled spirits received, examined, and disposed of.....	205,665
Returns and reports relating to fermented liquors received, examined, and disposed of.....	34,080
Computations of capacities of distilleries made, and data for assessment furnished .....	14,498
Locks examined and issued.....	3,926
Hydrometer sets, stems, cups, and thermometers tested and issued.....	2,589
Gauging-rods examined and issued.....	259
Wantage-rods examined and issued.....	828

*Division of Tobacco.*

Reports relating to tobacco received, examined, and disposed of.....	4,575
Reports relating to cigars received, examined, and disposed of .....	24,519
Abatement and refunding claims audited.....	332

*Division of Stamps.*

Value of stamps received and counted .....	\$132,479,680 00
Value of stamps counted and transmitted to the Secretary of the Treasury for destruction.....	\$1,073,839 16
Number of stubs examined .....	10,381,630
Number of stamps and coupons received for credit and counted.....	46,264,775
Number of reports received, examined, and disposed of .....	167,185

*Division of Assessments.*

Reports relating to assessments received, examined, and disposed of.....	51,172
Reports relating to bonded accounts received, examined, and disposed of .....	314,986
Reports and vouchers covering exportations received, examined, and disposed of.....	445,714
Claims for drawback disposed of.....	873

*Division of Accounts.*

Weekly reports received, examined, and disposed of .....	5,171
Monthly reports received, examined, and disposed of .....	21,641
Quarterly reports received, examined, and disposed of .....	533
Certificates of deposit received and recorded .....	33,115
Final accounts of collectors referred for settlement. ....	32
Drafts mailed to collectors for expenses of office .....	1,575
Drafts mailed to collectors for gaugers' fees and expenses .....	6,028
Drafts mailed to collectors, transfer of special deposits .....	361
Collectors' monthly reports of taxes, &c., consolidated into yearly statements. ....	1,626

*Division of Revenue Agents.*

Reports of revenue agents received and disposed of.....	2,278
Reports of collectors relative to illicit distilleries received and disposed of.....	364
Accounts of revenue agents received and examined.....	843
Miscellaneous expense accounts received and examined .....	301
Railroad and income cases examined and reported on.....	38
Transcripts of books of leaf-tobacco dealers examined and abstracted.	2,514

*Division of Appointments, Records, and Files.*

Commissions of storekeepers, storekeepers and gangers, gaugers and tobacco inspectors prepared and bonds examined.....	625
Collectors' bonds recorded .....	26
Reports of inspecting officers as to condition of collection districts received, examined, and acted upon.....	101
Reports of examining officers as to condition of collectors' offices received, examined, and acted upon.....	386

Pages of letters recorded .....	23, 566
Press copies of letters briefed, registered, and arranged for reference ..	54, 056
Pages of miscellaneous copying .....	16, 476
Letters for the entire bureau received and registered .....	45, 806
Letters indorsed, briefed, and filed .....	42, 685
Aggregate number of letters mailed by the bureau .....	65, 576
Blank forms prepared and issued .....	6, 824, 133
Blank books prepared and issued .....	12, 019

## MANUFACTURE OF PAPER.

During the fiscal year, all paper for internal-revenue stamps has been made by Messrs. S. D. Warren & Co., of Boston, under the contract entered into with said firm, which was referred to in my last annual report, and a new contract was made with them May 24, 1880. The prices paid under the new contract are for vegetable-sized paper, 11½ cents per pound, and for animal-sized paper, 12½ cents per pound, as against 9¾ cents and 10¾ cents paid under the previous contract. The paper furnished has been satisfactory as to quality, and all orders have been promptly executed.

## PRODUCTION OF STAMPS.

Since the close of the fiscal year, viz, on the 15th October, the work of printing documentary and proprietary stamps, which had been done by the American Bank Note Company of New York City, was transferred to the Bureau of Engraving and Printing. At this time all internal-revenue stamps are produced by said bureau except stamps imprinted upon bank-checks, which are supplied by the Graphic Company of New York City, and stamps upon foil wrappers for tobacco, which are printed by John J. Crooke & Co., of New York, both under the superintendence of this office.

## NUMBER AND VALUE OF STAMPS ISSUED.

During the fiscal year stamps were received by the stamp division of this office from the printers named, and issued to collectors, agents, and purchasers, as follows, viz:

Kind.	Number.	Value.
Stamps for distilled spirits .....	5, 107, 550	\$62, 733, 675 00
Stamps for tobacco and snuff .....	219, 862, 792	26, 410, 511 52
Stamps for cigars and cigarettes .....	61, 743, 548	15, 130, 078 25
Stamps for fermented liquors and brewers' permits .....	44, 896, 240	13, 172, 935 00
Stamps for special taxes .....	716, 620	9, 715, 300 00
Stamps for documents and proprietary articles .....	579, 275, 864	7, 780, 360 40
Total .....	911, 602, 614	134, 942, 860 17

The stamps delivered to this office by the Bureau of Engraving and Printing were, on their receipt, counted, and their issue involved the preparation of 18,547 packages, all of which were transmitted to collectors of internal revenue by registered mail. This business was conducted without the loss of a stamp, either while in the hands of the printers, in the custody of this office, or in the course of transmission. Thanks are due to the officers of the Washington City post-office for the promptness and fidelity manifested in the handling of this large amount of registered matter.

ABOLITION OF THE CHARGE OF TEN CENTS EACH FOR "OTHER THAN  
TAX-PAID SPIRIT-STAMPS."

By act of Congress approved May 28, 1880, the charge of 10 cents each for distillery-warehouse stamps, stamps for rectified spirits, whole-sale liquor dealers' stamps, stamps for imported spirits, and warehousing and rewarehousing stamps for grape brandy was abolished. The change in account was made by inventorying the stamps in collectors' hands and giving them credit for the value of the same, and did not necessitate the return of the stamps or any alteration in the form or style of them.

Collectors have been allowed credit for the stamps in their hands when the act took effect, with one exception, and this account will probably be settled at an early date.

REDEMPTION OF STAMPS.

I renew the recommendation made in my last report that that portion of section 17 of the act of March 1, 1879, which prohibits the redemption of stamps unless the same are presented within three years after their purchase from the government or a government agent for the sale of stamps, be repealed.

STAMPS REDEEMED AND EXCHANGED.

Number of claims for redemption of stamps allowed.....	590
Amount of claims for redemption of stamps allowed.....	\$32,361 67
Number of claims for exchange of stamps allowed.....	292
Amount of claims for exchange of stamps allowed.....	\$30,988 29

MATCH STAMPS SOLD.

*Amount of stamps sold to match manufacturers during the following fiscal years, commissions not deducted.*

1876.....	\$2,849,524
1877.....	2,982,275
1878.....	3,064,574
1879.....	3,357,251
1880.....	3,561,300

A limited number of general proprietary stamps has, no doubt, been purchased by match manufacturers, and are not included in the above statement. Nearly all the stamps sold to match manufacturers are sold on sixty days' credit, under the provisions of section 3425, United States Revised Statutes. There are now pending thirteen suits upon stamp agents' and match manufacturers' bonds for the recovery of \$117,413.01 due on the sale of stamps during the past five years.

REVENUE AGENTS.

During the fiscal year ended June 30, 1880, thirty-five revenue agents were employed, and this force has brought to the discharge of its duties a high order of intelligence, experience, and zeal.

Aggregate salary of agents.....	\$82,411 00
Aggregate amount for traveling expenses.....	46,774 46
Stationery furnished agents.....	383 54

Total amount of expenses of revenue agents for fiscal year .... 129,569 00

Revenue agents have been employed as follows:

As chief of division in this office.....	1
Assigned to divisions.....	23
Employed in examining collectors' accounts.....	5
Assistants to agents in charge of divisions.....	5
Special duty.....	1

WORK OF REVENUE AGENTS.

Number of persons arrested for violating internal-revenue laws on information of revenue agents.....	504
Violations of law reported.....	1,901
Value of property reported for seizure by revenue agents.....	\$194,593 76
Amount of uncollected taxes and penalties reported to collectors by revenue agents.....	95,109 28

STATISTICS OF OPERATIONS AGAINST ILLICIT DISTILLERS.

The following table shows the number of illicit stills seized, persons arrested, and casualties to officers and employes during the last fiscal year, and from July 1 to October 31 this year, inclusive:

Districts.	Stills seized.			Persons arrested.			Officers and employes killed and wounded.	
	During fiscal year.	Since June 30.	Total.	During fiscal year.	Since June 30.	Total.	Killed.	Wounded.
First Alabama.....	1		1	2		2		
Second Alabama.....	44	1	45					2
First California.....	2		2	3		3		
First Connecticut.....	1		1	3		3		
Dakota.....	1		1	3		3		
Florida.....	1		1					
Second Georgia.....	180	45	225	310	137	447		5
Third Georgia.....	17	3	20	6		6		
Thirteenth Illinois.....	3		3	3		3		
First Indiana.....	1		1					
Second Iowa.....	4		4	4		4		
Third Iowa.....	1		1	2		2		
Kansas.....	1		1	3		3		
Second Kentucky.....	32	9	41	15	5	20		
Fifth Kentucky.....	14	9	23	23		23		
Eighth Kentucky.....	55		55	9	4	13		
Ninth Kentucky.....	9		9	37	1	38		
Louisiana.....	9		9	3		3		
Third Maryland.....	1		1	7		7		
Fifth Massachusetts.....	1		1	2		2		
Tenth Massachusetts.....	1		1	2		2		
First Mississippi.....	1		1	1		1		
Second Missouri.....	3		3	9		9		
Sixth Michigan.....	1		1	3		3		
First New Jersey.....	1		1	1		1		
First New York.....	1		1					
Third New York.....	2		2	4		4		
Twelfth New York.....	1	1	2					
Twenty-sixth New York.....	1		1					
Second North Carolina.....	1		1					
Fourth North Carolina.....	44	3	47	11		11		
Fifth North Carolina.....	63	9	72	6		6		
Sixth North Carolina.....	268	47	315	97		97		1
Tenth Ohio.....	1		1	2		2		
Fifteenth Ohio.....	1		1	1		1		
Eighth Pennsylvania.....	1		1					
Twelfth Pennsylvania.....	2		2	3		3		
Fourteenth Pennsylvania.....	3		3	2		2		
South Carolina.....	54	3	57	15	1	16		1
Second Tennessee.....	32	3	35	26		26		
Fifth Tennessee.....	61	6	67	223	49	272		1
Eighth Tennessee.....	4	2	6	4	1	5		
Third Texas.....	2		2	16		16		
Fourth Texas.....				1		1		
Vermont.....	3		3	4		4		
Third Virginia.....				1		1		
Fourth Virginia.....	5		5	42	35	77		
Fifth Virginia.....	24	3	27	118		118		
Sixth Virginia.....	1		1					
First West Virginia.....	8	5	13	3		3		
Second West Virginia.....	1	1	2	1		1		
Washington Territory.....		1	1		1	1		
Total.....	969	151	1,120	1,031	234	1,265		10

The following table shows the number of illicit stills seized, persons arrested operating the same, and casualties to officers and employés in the suppression of illicit distillation, during the last four fiscal years, and from June 30 to November 1, 1880:

	1877.	1878.	1879.	1880.	June 30, 1880, to Novem- ber 1, 1880.	Total.
Stills seized.....	598	1,024	1,319	969	151	4,061
Persons arrested .....	1,174	1,976	2,924	1,031	234	7,339
Officers and employés killed .....	12	10	4			26
Officers and employés wounded .....	8	17	22	8	2	57

#### PROSECUTIONS OF REVENUE OFFICERS IN STATE COURTS.

The number of officers and employés of the government who have been proceeded against in State courts for acts committed while in discharge of their official duties during the present year is as follows:

Arkansas .....	4
Second district of Georgia.....	38
Third district of Georgia .....	1
Second district of Kentucky .....	2
Fifth district of Kentucky.....	1
Fourth district of North Carolina .....	2
Number of prosecutions previously reported during last four fiscal years.....	165
Total .....	213

#### EXPENDITURES FOR THE DISCOVERY OF AND PUNISHMENT FOR FRAUDS UPON THE INTERNAL REVENUE.

In accordance with the provisions of the act making the appropriation, the following detailed statement of expenditures from the appropriation for detecting and bringing to trial and punishment persons guilty of violating the internal-revenue laws is submitted.

Amount expended through collectors of internal revenue in the employment of persons for the detection of frauds, and for information leading to the discovery of frauds, and punishment of guilty persons, as follows:

Brayton, E. M., South Carolina.....	\$1,311 10
Bean, I. M., First Wisconsin.....	20 00
Brown, G. W., Second West Virginia .....	266 74
Brown, J. C., Twentieth Pennsylvania.....	22 00
Buckner, J. F., Fifth Kentucky .....	1,265 00
Blaine, Jno. G., Ninth Kentucky.....	431 00
Clark, A., Second Georgia .....	8,479 35
Carroll, A. B., Second Missouri .....	111 00
Cooper, J. A., Second Tennessee .....	20 00
Dana, C. S., Vermont .....	33 75
Duval, I. H., First West Virginia.....	745 00
Eagan, D., Florida .....	26 88
Fernald, W. L., Fourth Virginia .....	83 00
Harvey, J. D., First Illinois .....	135 75
Hill, James, Mississippi .....	6 00
Hollister, D. F., Second Connecticut .....	150 00
Landram, W. J., Eighth Kentucky .....	1,673 00
Ludlow, B. C., Third Texas .....	12 00



Mayer, L. H., First Alabama .....	\$73 00
Marks, M., Louisiana .....	20 00
Melton, J. M., Second Tennessee .....	438 16
Mott, J. J., Sixth North Carolina .....	1,446 50
Patterson, R. F., Eighth Tennessee .....	539 45
Prond, R. M., Third Maryland .....	160 08
Rapier, J. T., Second Alabama .....	919 50
Rives, J. H., Fifth Virginia .....	1,188 16
Stuart, W. A., Second Kentucky .....	839 00
Wade, E. C., Third Georgia .....	741 16
Wheeler, E., Arkansas .....	56 00
White, E. A., Second North Carolina .....	264 50
Woodcock, W. M., Fifth Tennessee .....	1,402 00
Wheeler, W. H., Fifth North Carolina .....	337 50
Young, I. J., Fourth North Carolina .....	377 03
Total disbursed by collectors .....	23,594 61

Amount expended through internal-revenue agents in the employment of persons for the discovery of violations of the internal-revenue law, and the punishment of guilty persons, as follows:

Atkinson, G. W. ....	\$90 00
Brown, C. P. ....	240 00
Brooks, A. H. ....	5,173 64
Blocker, O. H. ....	307 00
Crane, A. M. ....	4,510 31
Chapman, W. H. ....	1,128 12
Eldridge, C. W. ....	50 00
Gavett, W. A. ....	561 10
Grimeson, T. J. ....	2,014 14
Hale, J. H. ....	36 00
Kimney, T. J. ....	270 00
Kellogg, H. ....	442 15
Latham, E. ....	157 25
McLeer, E. ....	529 50
Meyer, F. ....	2,791 31
Montrose, H. L. ....	8 00
Spencer, D. A. ....	15 00
Somerville, W. ....	2,027 60
Trambull, J. L. ....	4,680 85
Tracie, T. C. ....	50 00
Wheeler, J. C. ....	1,506 58
Wagner, Jacob. ....	119 30
Whitfield, S. A. ....	2,614 93
Webster, E. D. ....	1,374 71
Total disbursed by revenue agents .....	30,027 55

For information leading to the discovery of unpaid taxes and penalties under Circular No. 99 .....	15,901 64
For rewards for illicit distilleries, under circular of March 10, 1875 .....	100 00
Amount paid for extra work in the examination of abstracts of the books of leaf-tobacco dealers, for the discovery of violations of law by manufacturers .....	4,286 87
Miscellaneous expenditures .....	287 30
Grand total .....	74,797 97

The accounts for expenditures under this appropriation are rendered monthly with an itemized statement, and in all cases supported by sub-vouchers duly sworn to. These accounts pass through all the accounting offices of the Treasury Department, and are filed in the Register's Office.

## TAXES COLLECTED FROM RAILROAD COMPANIES.

The following is a statement of unpaid internal revenue taxes, which accrued under former laws, collected from railroad companies during the last four fiscal years :

Fiscal year ended June 30, 1877 .....	\$55,590 30
Fiscal year ended June 30, 1878 .....	218,302 73
Fiscal year ended June 30, 1879 .....	101,340 96
Fiscal year ended June 30, 1880 .....	118,907 12
Total .....	<hr/> 494,141 11

The amount collected during the past fiscal year was received from twenty different railroad companies.

## SUITS AGAINST EX-COLLECTORS.

Subjoined is a list of suits against late collectors of internal revenue in which judgments have been rendered during the fiscal year ended June 30, 1880, furnished by the courtesy of the Solicitor of the Treasury :

United States vs. Jarrard O. Rawlins, late collector of internal revenue for the first collection district of California. Judgment for \$28,409.53.

United States vs. James B. Maupin, late collector of internal revenue for the second collection district of Missouri. Judgment for \$2,666.84.

United States vs. Frederick A. Sawyer, late collector of internal revenue for the second collection district of South Carolina. Judgment for amount of offer of compromise, \$5,219.15.

United States vs. Milton Stapp, late collector of internal revenue for the first collection district of Texas. Judgment for \$565.52.

## COMPROMISES AFTER JUDGMENT.

The records of the Solicitor of the Treasury show that for the fiscal year ending June 30, 1880, thirteen internal-revenue cases were compromised after judgment, the amount accepted being \$12,566.01, besides costs. Thirty-one offers of compromise after judgment were rejected, the amount involved being \$8,025.83. Twenty offers of compromise were pending July 1, 1880, the amount involved being \$6,554.28.

## SALE OF REAL ESTATE.

The United States has acquired title to about \$500,000 worth of real estate under the internal-revenue laws. Efforts are constantly made, through collectors and revenue agents and by correspondence, to make sale of this property, but with slight progress. Much of this property has been owned by the government for a number of years, and there seems to be no immediate prospect of being able to sell it at a fair valuation, especially in view of the fact that only quit-claim deeds are given upon the sale of said property.

It has occurred to me that it would be wise after the United States had held real estate so acquired for a period of eight or ten years without being able to sell it at a fair cash valuation that it should be put up and sold for whatever it would bring, and as no officer would probably desire to take the responsibility of ordering such a sale it seems to me that provision of law might well be made for the same.

## RECEIPTS FOR FIRST FOUR MONTHS OF PRESENT FISCAL YEAR.

The following table shows the receipts from the several sources of revenue for the first four months of the current fiscal year. The receipts for the corresponding period in the last fiscal year and a comparison of the receipts for the two periods are also given :

Sources of revenue.	Receipts from July 1, 1879, to October 31, 1879.	Receipts from July 1, 1880, to October 31, 1880.	Increase.	Decrease.
<b>SPIRITS.</b>				
Brandy distilled from apples, peaches, or grapes .....	\$269,975 05	\$389,440 74	\$119,465 69	.....
Spirits distilled from materials other than apples, peaches, or grapes .....	18,242,981 09	20,361,947 31	2,118,966 22	.....
Rectifiers' special tax .....	12,012 53	9,586 03	.....	\$2,426 50
Dealers, retail liquor .....	343,021 18	355,990 96	12,969 78	.....
Dealers, wholesale liquor .....	27,720 58	22,866 77	.....	4,853 81
Manufacturers of stills, and stills and worms manufactured .....	1,235 02	3,370 84	2,135 82	.....
Stamps for distilled spirits intended for export .....	3,942 20	4,334 40	392 20	.....
Stamps, warehouse, rectifiers', dealers', &c. ....	100,792 30	1,001 60	.....	99,790 70
Interest on tax upon spirits .....	51,721 54	31 87	.....	51,689 67
<b>Total .....</b>	<b>19,053,401 49</b>	<b>21,148,570 52</b>	<b>2,095,169 03</b>	<b>.....</b>
<b>TOBACCO.</b>				
Cigars and cheroots .....	4,758,928 89	5,476,026 05	717,097 16	.....
Cigarettes .....	225,921 76	410,802 12	184,970 36	.....
Manufacturers of cigars .....	7,854 24	6,607 04	.....	1,247 20
Snuff .....	233,185 56	241,908 28	8,812 72	.....
Tobacco of all descriptions .....	7,824,981 03	7,819,753 79	.....	5,227 24
Stamps for tobacco or snuff intended for export .....	2,081 30	2,432 30	351 00	.....
Dealers in leaf tobacco .....	5,346 96	4,847 63	.....	499 33
Retail dealers in leaf tobacco .....	520 83	850 84	330 51	.....
Dealers in manufactured tobacco .....	166,388 52	173,113 16	6,724 64	.....
Manufacturers of tobacco .....	712 13	540 85	.....	171 28
Dealers of tobacco .....	4,082 00	3,565 75	.....	516 25
<b>Total .....</b>	<b>13,230,003 82</b>	<b>14,140,636 31</b>	<b>910,632 49</b>	<b>.....</b>
<b>FERMENTED LIQUORS.</b>				
Fermented liquors, tax of \$1 per barrel on ..	4,477,362 67	5,051,656 12	574,293 45	.....
Brewers' special tax .....	7,245 86	6,133 47	.....	1,112 39
Dealers in malt liquors' special tax .....	42,871 80	39,449 42	.....	3,422 38
<b>Total .....</b>	<b>4,527,480 33</b>	<b>5,097,239 01</b>	<b>569,758 68</b>	<b>.....</b>
<b>BANKS AND BANKERS.</b>				
Bank deposits .....	541,106 75	493,822 71	.....	47,284 04
Bank deposits, savings, &c .....	24,433 56	17,460 29	.....	6,973 27
Bank capital .....	221,005 58	192,731 45	.....	28,274 13
Bank circulation .....	25,743 94	544 32	.....	25,199 62
<b>Total .....</b>	<b>812,289 83</b>	<b>704,558 77</b>	<b>.....</b>	<b>107,731 06</b>
<b>MISCELLANEOUS.</b>				
Adhesive stamps .....	2,403,163 68	2,571,536 43	168,372 75	.....
Penalties .....	60,370 39	90,970 00	30,599 61	.....
Articles and occupations formerly taxed but now exempt .....	44,395 28	35,807 26	.....	8,588 02
<b>Total .....</b>	<b>2,507,929 35</b>	<b>2,698,313 69</b>	<b>190,384 34</b>	<b>.....</b>
<b>Aggregate receipts .....</b>	<b>40,131,104 82</b>	<b>43,789,318 30</b>	<b>3,658,213 48</b>	<b>.....</b>

## TOBACCO.

The total amount of collections from tobacco for the fiscal year ended June 30, 1880, was \$38,870,140.08. This amount includes the collections of internal revenue taxes imposed upon imported manufactured tobacco, snuff, and cigars, and the special taxes paid by manufacturers of and dealers in leaf and manufactured tobacco, and is less than the receipts from the same source for the fiscal year immediately preceding by \$1,264,862.57.

The following exhibit will show the several amounts collected from the different sources of the tobacco tax, and the relative increase or decrease, in each case, as compared with the collections from the same sources for the fiscal year ended June 30, 1879.

## TOBACCO AND SNUFF.

Manufactured tobacco at 16 cents per pound .....	\$21, 168, 166 23
Manufactured tobacco at 20 cents per pound .....	244 32
Manufactured tobacco at 24 cents per pound .....	1, 743 80
Snuff, taxed at 16 cents per pound .....	634, 609 34
Total for the year ended June 30, 1880 .....	21, 804, 763 74
Total for the year ended June 30, 1879 .....	25, 606, 010 25
Decrease of collections on tobacco and snuff .....	3, 801, 246 51

Of this decrease \$3,533,720.50 was on chewing and smoking tobacco, and \$267,526.01 on snuff.

## CIGARS AND CIGARETTES.

Cigars, taxed at \$6 per thousand .....	\$14, 206, 819 49
Cigarettes, taxed at \$1.75 per thousand .....	715, 227 39
Cigarettes, taxed at \$6 per thousand .....	42 00
Total collections for year ended June 30, 1880 .....	14, 922, 088 88
Total collections for year ended June 30, 1879 .....	12, 532, 452 72
Increase in collections from cigars and cigarettes .....	2, 389, 636 16

## OTHER COLLECTIONS.

Export stamps, year ended June 30, 1880 .....	\$6, 622 40
Export stamps, year ended June 30, 1879 .....	7, 863 90
Decrease in sale of export stamps .....	1, 241 50
Dealers in manufactured tobacco, year ended June 30, 1880 .....	1, 864, 422 41
Dealers in manufactured tobacco, year ended June 30, 1879 .....	1, 705, 720 20
Increase in collections from dealers in manufactured tobacco ....	158, 702 21
Special taxes, manufacturers of tobacco and cigars, in 1880 .....	153, 132 71
Special taxes, manufacturers of tobacco and cigars, in 1879 .....	161, 435 23
Decrease in special taxes, manufacturers of tobacco and cigars ..	8, 302 52
Special taxes, peddlers of tobacco, year ended June 30, 1880 .....	28, 700 45
Special taxes, peddlers of tobacco, year ended June 30, 1879 .....	31, 247 63
Decrease in collections from peddlers of tobacco .....	2, 547 18
Dealers in leaf tobacco, year ended June 30, 1880 .....	90, 409 49
Dealers in leaf tobacco, year ended June 30, 1879 .....	90, 272 72
Increase in collections from dealers in leaf tobacco .....	136 77

## PRODUCTION OF MANUFACTURED TOBACCO, CIGARS, ETC.

Adding to the several quantities of tobacco, snuff, and cigars removed for consumption during the fiscal year ended June 30, 1880, as computed from the amount of revenue derived therefrom, the quantities removed in bond for export, we have the following results, which show the entire production for the last fiscal year:

	Pounds.
Tobacco, taxed at 16 cents per pound .....	132,301,039
Tobacco, taxed at 20 cents per pound .....	1,222
Tobacco, taxed at 24 cents per pound .....	7,266
Total quantity removed for consumption .....	132,309,527
Snuff, taxed at 16 cents per pound, removed for consumption .....	3,966,308
Tobacco and snuff removed for exportation .....	9,807,050
Total product of tobacco and snuff, 1880 .....	146,082,885
Total production for year ended June 30, 1879 .....	131,433,409
Increase of production .....	14,649,476

## PRODUCTION OF CIGARS AND CIGARETTES.

	Number.
Cigars, cheroots, &c., taxed at \$6 per thousand .....	2,367,803,250
Cigarettes, taxed at \$1.75 per thousand .....	408,701,365
Cigarettes, taxed at \$6 per thousand .....	7,000
Cigars removed for exportation .....	2,540,825
Cigarettes removed for exportation .....	41,107,380
Total product for fiscal year 1880 .....	2,820,159,820
Total product for fiscal year 1879 .....	2,276,534,081
Increase during fiscal year 1880 of .....	543,625,739

## APPARENT EFFECTS OF REDUCTION OF TAX RATE.

From the foregoing statement it will be seen that the entire receipts from manufactured tobacco, including snuff, for the fiscal year ended June 30, 1880, were \$21,804,763.74. This is \$3,801,246.51 less than the receipts from the same sources during the fiscal year ended June 30, 1879, and \$4,579,108.56 less than the receipts from the same sources during the fiscal year ended June 30, 1878, when the taxes on snuff were collected at the rate of 32 cents per pound, and on manufactured tobacco at 24 cents per pound. These collections were made from 3,966,308 pounds of snuff and 132,309,527 pounds of smoking and chewing tobacco.

Had there been no reduction in the rate of tax on snuff and tobacco, the number of pounds which reached taxation during the last fiscal year would have yielded a revenue of \$33,023,505.04, or \$11,218,741.30 more than was collected.

The total collections from cigars, cheroots, and cigarettes for the fiscal year ended June 30, 1880, were \$14,922,088.88. This is \$2,389,636.16 more than the receipts from the same sources during the previous fiscal year.

Owing to the large increase in the collections from cigars and cigarettes, the total collections from tobacco, snuff, cigars, and cigarettes amount to \$36,726,852.62, which is only \$1,411,610.35 less than the collections from the same sources for the previous fiscal year.

To fairly determine the effects of the reduction of the rate of tax on manufactured tobacco, including snuff, made by the act of March 1, 1879, a comparison should be made of the receipts of the two entire fiscal years—1878, when the rate of tax on snuff was 32 cents per pound, and

the rate of tax on chewing and smoking tobacco was 24 cents per pound, and 1880, when the tax was uniformly collected on all classes of manufactured tobacco, including snuff, at 16 cents per pound—leaving out all collections made from cigars and cigarettes, as no change was made in the rate of tax on cigars and cigarettes by the act of March 1, 1879.

This comparison shows a falling off in the receipts from chewing and smoking tobacco and snuff, due to the reduction of rates of \$4,579,108.56.

The apparent increase in the consumption of manufactured tobacco, or in the quantity placed on the market tax paid, is not thought to be due to a reduction of the cost of tobacco to consumers as has been claimed, for the reason that there has been no reduction of the price of tobacco paid by consumers, excepting, perhaps, a slight reduction on the very lowest grades of smoking and chewing tobacco.

The true cause of the increase in consumption is to be found in the general revival of business within the last two years, more and better pay to laborers, and increased means to purchase with.

The natural increase in population, and the large influx into the country of foreigners during the last two years, nearly all of whom are consumers of tobacco, have also tended to increase consumption. The presumption is by no means a violent one that the increased consumption would have been about equal if there had been no reduction of rate, and that the collections, instead of being less than \$22,000,000 during the last fiscal year, would have been more than \$33,000,000 from chewing and smoking tobacco and snuff, and the total collections from all tobacco sources would have reached the round sum of \$50,000,000.

#### IMPORTED CIGARS.

The cigars imported during the fiscal year ended June 30, 1880, as given by the Bureau of Statistics—

	Pounds.
Aggregated in weight .....	652, 402
Of this quantity there were exported.....	41, 329
Leaving to be withdrawn for consumption.....	611, 073
Allowing 13½ pounds to the thousand as the weight of imported cigars, the number of imported cigars included in the above table would be.	45, 264, 667
Number withdrawn in 1879 was.....	40, 666, 518
Increase during fiscal year 1880 was.....	4, 598, 149

#### LEAF TOBACCO.

Assuming that for every one hundred pounds of leaf tobacco used in the manufacture of tobacco and snuff eighty-five pounds of manufactured products have resulted, and that for every one thousand cigars manufactured twenty-five pounds of leaf tobacco were used, and that for every thousand cigarettes made five pounds of leaf tobacco were required, the leaf tobacco used during the fiscal year ended June 30, 1880, for manufacturing tobacco, snuff, and cigars aggregated in pounds as follows:

	Pounds.
For manufacturing tobacco and snuff.....	171, 862, 218
For manufacturing cigars and cigarettes.....	60, 376, 204
Total leaf manufactured.....	232, 238, 422
Deduct imported leaf used.....	8, 876, 515
Total domestic leaf used.....	223, 361, 907
Leaf exported during fiscal year 1880.....	215, 910, 187
Total leaf accounted for .....	439, 272, 094



## SUGGESTED CHANGE IN CIGAR STAMPS.

The attention of the Secretary of the Treasury and of the Commissioner of Internal Revenue, as well as of both Houses of Congress, has been called to suggested changes in the present mode of collecting the tax on cigars by placing the stamp upon the box, and the question arose whether the penal provisions of the law would still apply if for the present mode of affixing the stamp some plan were substituted which contemplated the destruction of portions of the stamp piecemeal as the cigars were sold from the box. The question was submitted to the Attorney-General, who held that the penal provisions of the law would not so apply. As this subject has been considered by appropriate committees of Congress, I respectfully submit whether it would not be proper to have the law so modified as to allow such changes in the form of the stamps as the Secretary of the Treasury and the Commissioner of Internal Revenue might deem would best protect the interests of the government.

## DISTILLED SPIRITS.

In my report for the fiscal year ended June 30, 1879, attention was called to the collection of the taxes on the spirits withdrawn from distillery warehouses for exportation and lost in transportation between the distillery and the port of exportation, and to the complaint made by distillers and others engaged in the export trade as to the hardship of such collections. In accordance with my recommendation in the matter, exporters were relieved from this tax by an act of Congress passed December 20, 1879. Pursuant to the provisions of the act allowance was made during the year for loss by leakage in transportation amounting to 8,484 gallons.

## EXPORTATION OF ALCOHOL IN METALLIC CANS.

In connection with the subject of deficiency taxes on spirits withdrawn for exportation I had the honor to recommend in my last annual report that provision be made by law for the exportation of alcohol in metallic cans of ten gallons and upward. In accordance with this recommendation certain changes were made in sections 3287 and 3330 Revised Statutes; by sections 6 and 11 of the internal-revenue act of May 28, 1880, providing for the withdrawal of spirits from receiving cisterns into casks or *packages* of not less capacity than ten gallons, wine measure, and providing for the exportation of spirits in original *packages*. No exports of alcohol in tin cans have, however, been made under these privileges, as it appears that there is no foreign demand for packages of alcohol in cans of larger size than five gallons. As it also appears that exporters are willing to encase two five-gallon tin cans in one wooden inclosure, and as I believe such a package may be properly protected by stamps, I would recommend that the law be so amended as to provide for the exportation of alcohol in metallic cans of five gallons and upward, provided the quantity contained in the wooden inclosure is not less than ten gallons.

## PRODUCTION OF SPIRITS DURING THE YEAR.

The quantity of spirits (90,355,270 gallons) produced and deposited in distillery warehouses during the fiscal year ended June 30, 1880, is—

ceeded the production of the previous year by 18,462,649 gallons, the product for 1879, as was shown in my report for that year, having been greater than for any previous year.

The increase in production for the fiscal year 1880 over the production for the fiscal year 1879 is distributed among the different varieties known to the trade, as follows :

Increase in production of—		Gallons.
Bourbon whisky .....		6, 827, 067
Rye whisky.....		2, 340, 943
Alcohol.....		2, 036, 726
Rum.....		195, 846
Gin.....		21, 892
Pure, neutral, or cologne spirits.....		7, 198, 489
Miscellaneous .....		2, 664, 949
Total .....		21, 285, 912
Decrease in production of—		
High wines .....		2, 823, 263
Net increase .....		18, 462, 649

The causes which, in addition to the improvement of the times, have led to this great increase in the production of distilled spirits, are the amendments of the internal-revenue laws, which have secured—

1. The increase in the bonded period from one year to three years ;
2. The allowance for loss by leakage while in warehouse ;
3. Relief from the payment of interest on taxes while in bonded warehouse; and
4. The allowance for leakage of spirits while in transportation for export or to manufacturing warehouse.

APPARENT OVER-PRODUCTION OF SPIRITS.

I take the liberty of calling especial attention of distillers and the trade to the fact that on the 1st July, 1879, there were on hand in distillery warehouses 19,212,000 gallons of spirits, which was an increase of about 5,000,000 of gallons over the stock on hand at the same period of the previous year, and that on the 1st day of November, 1880, the amount of spirits on hand was 32,640,000, being an increase of 13,400,000 gallons over the amount on hand on the 1st July, 1879. The steady increase in the number and capacity of distilleries in operation, suggests the probability of the continued enlargement of the stock on hand. It has occurred to me that this business was on the eve of being overdone, and that in the event of a recurrence of the agitation for a reduction of the tax, the holders of these spirits would be in danger of loss.

RECEIPTS FROM DISTILLED SPIRITS.

The following statement shows the receipts from the several articles or occupations relating to distilled spirits subject to tax under internal-revenue laws now in force, for the fiscal years ended June 30, 1879 and

1880, together with the increase or decrease on each article or occupation :

Articles or occupations.	Receipts for fiscal year ended June 30—		Increase.	Decrease.
	1879.	1880.		
Spirits distilled from apples, peaches, or grapes .....	\$919, 099 74	\$905, 201 75	.....	\$13, 897 99
Spirits distilled from materials other than apples, peaches, or grapes .....	46, 790, 364 50	55, 013, 917 43	\$8, 223, 552 93	.....
Wine made in imitation of champagne.....	.....	.....	.....	.....
Rectifiers (special tax).....	160, 123 21	172, 004 60	11, 881 39	.....
Retail liquor dealers (special tax).....	3, 903, 036 24	4, 172, 283 85	269, 247 61	.....
Wholesale liquor dealers (special tax)....	409, 115 56	406, 526 72	.....	2, 588 84
Manufacturers of stills (special tax).....	1, 315 86	1, 787 53	471 67	.....
Stills or worms manufactured (special tax)	2, 210 00	4, 360 00	2, 150 00	.....
Stamps for distilled spirits intended for export .....	17, 212 20	19, 743 60	2, 531 40	.....
Stamps, distillery warehouse .....	126, 374 50	149, 505 00	23, 130 50	.....
Stamps for rectified spirits.....	123, 503 20	133, 193 70	10, 690 50	.....
Stamps, wholesale liquor dealers' .....	43, 804 90	47, 339 10	3, 534 20	.....
Stamps, special bonded warehouse.....	225 30	364 90	139 60	.....
Stamps, special bonded warehouse (re-warehousing) .....	.....	1 00	1 00	.....
Stamps for imported spirits.....	.....	285 20	285 20	.....
Interest on tax upon spirits.....	74, 809 48	158, 904 41	84, 094 93	.....
Total .....	52, 570, 284 60	61, 185, 508 79	8, 615, 224 10	.....

NOTE.—Many tabular statements are omitted for want of space, but they can all be found in the bound volume of the Commissioner's report.

SPIRITS AND TOBACCO REMOVED IN BOND FOR EXPORT.

The following statement shows the quantity and percentage of production of distilled spirits and manufactured tobacco (including snuff) removed in bond for export during each fiscal year since the passage of the act of June 6, 1872:

Year.	Distilled spirits.		Year.	Manufactured tobacco.	
	Taxable (proof gallons ex-ported.	Percent-age of produc-tion.		Pounds of to-bacco ex-ported.	Percent-age of produc-tion.
1873.....	2, 358, 630	3. 45+	1873.....	10, 110, 045	8. 59+
1874.....	4, 060, 160	5. 90+	1874.....	10, 800, 927	9. 11+
1875.....	587, 413	0. 96+	1875.....	9, 179, 316	7. 13+
1876.....	1, 308, 900	2. 25+	1876.....	9, 434, 485	7. 87+
1877.....	2, 529, 528	4. 22+	1877.....	11, 335, 046	8. 88+
1878.....	5, 499, 252	9. 80+	1878.....	10, 581, 744	8. 89+
1879.....	14, 837, 581	20. 63+	1879.....	11, 034, 951	8. 62+
1880.....	16, 765, 666	18. 55+	1880.....	9, 808, 409	6. 71+
Total.....	47, 947, 130		Total.....	82, 284, 923	

EXPORTATION OF DISTILLED SPIRITS.

The following figures show the increase or decrease as to the various kinds of spirits exported in the year 1880, as compared with the year 1879:

	Gallons.
Increase in alcohol .....	1, 313, 993
Increase in rum.....	85, 861
Increase in pure, neutral, or cologne spirits .....	548, 908
Increase in high wines .....	3, 128
Total increase.....	1, 951, 890
	Gallons.
Decrease in bourbon whisky.....	17, 563
Decrease in rye whisky.....	5, 013
Decrease in miscellaneous .....	1, 229
Total decrease .....	23, 805
Net increase .....	1, 928, 085

As was the case in the fiscal years 1878 and 1879, the bulk of the spirits exported during the fiscal year 1880 was alcohol produced in the northern part of Illinois, shipped on foreign-bound vessels at New York, and consigned to Marseilles, France. During the year 1880 the exportations to Genoa, Gibraltar, and Valencia have in each case exceeded one million gallons, and the quantity exported to each of the ports of Bilbao and Palma, Spain, has nearly reached one million gallons.

The number of ports to which alcohol was exported in 1879 was forty-four, and during 1880, fifty-three. During the fiscal year 1879 the total number of ports to which spirits were exported was sixty-four, and during the fiscal year 1880 was seventy-one.

It will be observed that the foreign demand for American spirits is still increasing, and that the quantity exported during each fiscal year continues to be greater than during the preceding year.

Realizing the importance of placing the legitimate distilling interests of the country on a sound business basis, and thus discouraging the production of illicit spirits, this office has encouraged the exportation of spirits, affording such facilities as was consistent with the due protection of the interests of the government from time to time as occasion required.

Those features of the act passed during last session of Congress, providing for the allowance for actual loss during transportation and for removing the restriction as to size of exported packages and as to the thousand gallons limitation, were passed upon my recommendation.

Railroads and other transportation companies have also been authorized by regulations of the department to become sureties for exporters where it has been shown that such corporations have legal ability to act in that capacity. This measure has been found to operate satisfactorily. Under this system the security of the United States has been of the best character, and the exporters have been enabled to land spirits at foreign ports at quite a saving in brokerage charges incurred in obtaining sureties who were not jointly interested with them in the due delivery of the goods.

SPIRITS WITHDRAWN FROM DISTILLERY WAREHOUSES UPON PAYMENT OF TAX.

	Gallons.
The quantity of spirits withdrawn from distillery warehouses upon payment of tax was in 1880.....	61, 100, 362
And was in 1879.....	51, 885, 939
Increase.....	9, 214, 423

This increase is distributed, except as to the kind known as high wines, as follows:

	Gallons.
Bourbon whisky.....	1,601,020
Rye whisky.....	750,208
Alcohol.....	537,069
Rum.....	108,792
Gin.....	36,507
Pure, neutral, or cologne spirits.....	6,866,998
Miscellaneous.....	1,829,791
<b>Total increase.....</b>	<b>11,730,405</b>
<b>Decrease in withdrawals of high wines.....</b>	<b>2,515,982</b>
<b>Net increase in withdrawals, tax-paid.....</b>	<b>9,214,423</b>

The amount of interest tax collected during the fiscal year to May 28, 1880, the date of the repealing act, was \$158,994.41.

The quantity of each month's product of spirits in warehouse July 1, 1879, which was withdrawn during the year ended June 30, 1880, is shown in the following tabular statement:

Product of the month of—	In warehouse July 1, 1879.	Withdrawn during year ended June 30, 1880.	Remaining in warehouse June 30, 1880.
	Gallons.	Gallons.	Gallons.
<b>1877.</b>			
March.....	268,183	1,095,558	8,006
April.....	309,992		
May.....	440,481		
June.....	350,848	238,865	111,982
July.....	96,450	65,731	30,719
August.....	30,933	26,184	4,749
September.....	43,706	37,467	6,239
October.....	34,313	22,426	11,887
November.....	82,066	57,495	24,571
December.....	171,162	122,186	48,976
<b>1878.</b>			
January.....	401,470	271,166	130,313
February.....	498,412	348,782	149,630
March.....	649,042	469,606	179,436
April.....	888,379	622,600	265,779
May.....	846,344	538,208	308,136
June.....	521,126	374,805	146,321
July.....	240,303	167,087	73,276
August.....	127,294	84,039	43,255
September.....	122,474	86,867	35,607
October.....	266,487	186,612	79,875
November.....	490,549	291,684	198,865
December.....	947,705	594,716	352,989
<b>1879.</b>			
January.....	1,236,742	652,077	584,665
February.....	1,514,241	741,287	772,954
March.....	2,036,418	1,062,471	973,947
April.....	2,271,802	996,847	1,275,045
May.....	2,298,061	976,461	1,321,600
June.....	1,942,328	1,020,756	912,573
<b>Total.....</b>	<b>19,219,470</b>	<b>11,160,983</b>	<b>8,051,487</b>

#### TRANSFER OF SPIRITS TO MANUFACTURING WAREHOUSES.

Section 20 of the internal-revenue act of March 1, 1879, providing for transfers of spirits from distillery warehouses to manufacturing warehouses, was amended by section 14 of the act of May 28, 1880, so as to read as follows:

That under such regulations and requirements as to stamps, bonds, and other security as shall be prescribed by the Commissioner of Internal Revenue, any manufact

of medicines, preparations, compositions, perfumeries, cosmetics, cordials, and other liquors, for export, manufacturing the same in a duly constituted manufacturing warehouse, shall be authorized to withdraw, in original packages, from any distillery warehouse, so much distilled spirits as he may require for the said purpose, without the payment of the internal-revenue tax thereon.

The amendment made by the act of May 28, 1880, enlarged the scope of the act of March 1, 1879, so as to provide for the withdrawal of any kind of distilled spirits from distillery warehouses, the articles to be withdrawn having theretofore been limited to alcohol.

The section as amended also provides for the use of the spirits in manufacturing warehouses in all of the articles authorized by law to be made in such warehouses. The effect of the amendment has been to make a new outlet for the exportation of American spirits.

Section 15 of the act of May 28, 1880, also makes provision, in case of transfers of spirits to manufacturing warehouses, for an allowance for loss by unavoidable accident, without fraud or negligence, as in the case of spirits shipped in bond for exportation.

The transfers during the fiscal year 1879 were 13,213 gallons, and during the fiscal year 1880 were 218,212 gallons. Attention, however, is called to the fact, that inasmuch as the original act was passed March 1, 1879, and the amendatory act May 28, 1880, the transactions of the respective fiscal years are not fair indications of the quantity that will probably be annually withdrawn under said acts.

#### SPIRITS WITHDRAWN FROM WAREHOUSE FOR SCIENTIFIC PURPOSES, AND FOR USE OF THE UNITED STATES.

The quantity of alcohol withdrawn free of tax from distillery warehouses for the use of colleges and other institutions of learning in the preservation of specimens of natural history in their several museums, or for use in their chemical laboratories, and of spirits of various kinds for use of the United States, amounted during the year to 23,048 gallons, an increase of 5,362 gallons over the quantity withdrawn during the previous year.

#### SPIRITS LOST BY CASUALTY DURING THE YEAR.

	Gallons.
The quantity of spirits on deposit in distillery warehouses at commencement of fiscal year was.....	19, 212, 470
The quantity deposited during the year was.....	90, 355, 270
Total .....	109, 567, 740

Of this quantity, 14,231 gallons were lost by casualty, being about one-seventy-seventh of one per cent., or one gallon of each 7,696 + gallons was so lost.

It was my pleasure, in my report of last year, during which the loss of spirits was less than one-fiftieth of one per cent. of the quantity stored in warehouses, to call attention to the care exercised by the distillers and storekeepers in the preservation of this inflammable material. As the loss this year is much less than that occurring during the year 1879, it is deemed proper to call renewed attention to the diligence exercised by the distillers and government officers in the preservation of this class of property.

It is quite evident, from the slight loss for the past four years, that the fire insurance on spirits in distillery warehouses might with safety be fixed at the very lowest rate.

The quantity of spirits lost by casualty, on which the tax was abated, during the year, under sections 3221, 3222, and 3223, Revised Statutes, was 4,276 gallons.



## DISTILLED SPIRITS ALLOWED FOR LOSS BY LEAKAGE OR EVAPORATION IN WAREHOUSES.

The quantity of distilled spirits allowed under the provisions of section 17 of the act of May 28, 1880, for loss by leakages or evaporation in warehouses during June, 1880 (the only month of the fiscal year in which the act was in force), was 75,834 gallons.

The quantity allowed during the first four months of the current fiscal year was 271,169 gallons.

## SPIRITS REMAINING IN WAREHOUSES AT THE CLOSE OF THE YEAR.

In my report for the year ended June 30, 1879, it was shown that the quantity (19,212,470 gallons) in warehouses June 30, 1879, exceeded the quantity in warehouse at the close of any preceding fiscal year. This quantity, however, is greatly exceeded by the quantity (31,363,869 gallons) remaining in warehouses June 30, 1880.

The following table shows the quantity remaining in distillery warehouses at the close of each of the twelve fiscal years during which spirits have been stored in such warehouses:

	Gallons.
Quantity remaining June 30, 1869.....	16,685,166
Quantity remaining June 30, 1870.....	11,671,886
Quantity remaining June 30, 1871.....	6,744,360
Quantity remaining June 30, 1872.....	10,103,392
Quantity remaining June 30, 1873.....	14,650,148
Quantity remaining June 30, 1874.....	15,575,224
Quantity remaining June 30, 1875.....	13,179,596
Quantity remaining June 30, 1876.....	12,595,850
Quantity remaining June 30, 1877.....	13,091,773
Quantity remaining June 30, 1878.....	14,088,773
Quantity remaining June 30, 1879.....	19,212,470
Quantity remaining June 30, 1880.....	31,363,869

It is understood from leading distillers that since the extension of the bonded period the business of selling spirits in bond has largely increased, and that the greater portion of goods now in bond is owned by dealers in various parts of the country who have assumed to the distiller the payment of the taxes as they fall due.

It is evident that the causes adverted to in my last year's report as leading to this great increase in the stock of spirits remaining in distillery warehouses, and as indicating the growing ability on the part of distillers to discharge their obligations to the government, have been in full operation the past fiscal year.

The case of the sixth district of North Carolina was then cited as illustrating the great increase in the number of the legally authorized distilleries in sections of the country recently infested by illicit distillers. The same district can be again used as illustrating this fact, the number of distillery warehouses in that district having increased from 184 July 1, 1879, to 229 June 30, 1880.

In my last year's report reference was made to the building of the largest distillery in the United States at the close of the fiscal year. I have now to report that this distillery has been in successful operation during the year, and that others of its class have been greatly enlarged and fitted up with the latest improvements, thus enabling them to materially reduce the cost of production and to improve the character of their products. By the use of the latest improved purifying, refining, and redistilling apparatus, and the employment of experts, fine grades of alcohol,

and pure, neutral, or cologne spirits are produced in distilleries ready for use in the arts and sciences without additional manipulation.

The decrease in the production and withdrawal of high wines, and the increase in the production and withdrawal of all other and finer kinds of spirits, are facts satisfactorily showing the improvement in the methods of producing distilled spirits.

Nearly nine-tenths of the spirits remaining in warehouse June 30, 1880 (27,311,138 gallons out of 31,363,869 gallons), were bourbon and rye whiskies, and the increase in the quantity in warehouse that day over that in warehouse June 30, 1879, was mainly the increase in these two varieties.

There was an increase in all varieties except high wines, as follows:

Increased quantity in warehouse, of—		Gallons.
Bourbon whisky .....	7,747,856	
Rye whisky.....	3,482,525	
Alcohol.....	58,056	
Rum.....	54,184	
Miscellaneous.....	1,222,860	
Total increase.....	12,563,461	
Decreased quantity in warehouse, of—		
	Gallons.	Gallons.
High wines .....	224,713	
Pure, neutral, or cologne spirits .....	158,061	
Gin.....	29,288	
		412,062
Net increase of spirits in warehouse.....		12,151,399

FERMENTED LIQUORS.

The receipts from fermented liquors for the fiscal years ended June 30, 1879 and 1880, are shown in the following statement:

Sources.	Receipts for fiscal year ended June 30—		Increase.	Decrease.
	1879.	1880.		
Fermented liquors, tax of \$1 per barrel on .....	\$10,270,352 83	\$12,346,077 26	\$2,075,724 43	.....
Brewers' special tax .....	202,779 61	201,395 97	.....	\$1,383 64
Dealers in malt liquors' special tax....	256,187 64	282,329 61	26,141 97	.....
Total.....	10,729,320 08	12,829,802 84	2,100,482 76	.....

The following statement shows, by fiscal years, the aggregate production of fermented liquors from September 1, 1862, to June 30, 1880:

Fiscal years ended June 30—	Barrels of not more than 31 gallons each.	Fiscal years ended June 30—	Barrels of not more than 31 gallons each.
1863.....	1,765,827	1872.....	8,659,427
1864.....	3,459,119	1873.....	9,633,323
1865.....	3,657,181	1874.....	9,800,887
1866.....	6,207,401	1875.....	9,452,697
1867.....	6,291,184	1876.....	9,902,352
1868.....	6,146,063	1877.....	9,810,060
1869.....	6,342,055	1878.....	10,241,471
1870.....	6,574,616	1879.....	11,103,044
1871.....	7,740,260	1880.....	13,347,116

Prior to September 1, 1866, the tax on fermented liquors was paid in currency and the full amount of tax was returned by collectors. From and after that date the tax was paid by stamps on which a deduction of  $7\frac{1}{2}$  per cent. was allowed to brewers using them. Of the 6,207,401 barrels produced during the fiscal year 1866, the tax on 1,033,319 barrels was paid in money, and the tax on 5,174,082 barrels was paid by stamps.

The foreign demand for American malt liquors is still increasing, the applications for drawback during the fiscal year ended June 30, 1880, upon exports made to foreign ports having more than quadrupled those made for the fiscal year ended June 30, 1879. I take this occasion to renew my recommendation that provision be made in internal revenue laws for the exportation of this article in bond.

#### EXPORTATION OF MANUFACTURED TOBACCO AND SNUFF IN BOND.

The subjoined table shows, as removed and unaccounted for July 1, 1879, and July 1, 1880, the quantity in pounds of manufactured tobacco and snuff which had been removed for exportation in bond, and concerning which the proofs of landing at a foreign port had not been furnished prior to the dates named.

##### 1. *Removed and unaccounted for July 1, 1879.*

	Pounds.	Pounds.
Tobacco, at 20 cents tax.....	39,575.00	
Bonds in the hands of district attorneys.....	17,094.00	
Tobacco, at 24 cents, removed under exportation bonds ..	3,047,262.50	
Tobacco, at 24 cents, removed under transportation bonds..	474,336.50	
Tobacco, at 16 cents, removed under exportation bonds ..	1,673,900.00	
Tobacco, at 16 cents, removed under transportation bonds..	104,750.50	
Snuff, at 32 cents, removed under exportation bonds .....	1,642.00	
Snuff, at 32 cents, removed under transportation bonds...	84.00	
	<hr/>	5,358,644.50

##### 2. *Removed during the year ended June 30, 1880.*

Tobacco, at 24 cents tax (excess).....	487.00	
Tobacco and snuff, at 16 cents tax.....	9,807,050.25	
Tobacco, at 16 cents tax (excess).....	871.50	
	<hr/>	9,808,408.75
		<hr/>
		15,167,053.25
		<hr/>

##### 3. *Exported and during the year accounted for.*

Tobacco, at 20 cents tax.....	10,573.00	
Tobacco, at 24 cents tax.....	2,778,006.00	
Tobacco, at 16 cents tax.....	7,330,787.50	
Tobacco, at 24 cents tax paid on deficiencies.....	3,207.50	
Tobacco, at 16 cents tax paid on deficiencies.....	1,049.00	
Snuff, at 32 cents tax.....	1,726.00	
	<hr/>	10,125,349.00

##### 4. *Remaining unaccounted for June 30, 1880.*

Tobacco, at 20 cents tax.....	29,002.00	
Bonds in the hands of district attorneys.....	17,094.00	
Tobacco, at 24 cents, removed under exportation bonds ..	533,212.00	
Tobacco, at 24 cents, removed under transportation bonds..	207,660.50	
Tobacco, at 16 cents, removed under exportation bonds ..	3,946,809.25	
Tobacco, at 16 cents, removed under transportation bonds..	307,926.50	
	<hr/>	5,041,704.25
		<hr/>
		15,167,053.25
		<hr/>

The quantity removed from manufactories for exportation during the fiscal year ended June 30, 1880, is 1,226,542.75 pounds less than that removed during the fiscal year ended June 30, 1879.

EXPORTATION OF CIGARS AND CIGARETTES IN BOND.

1. Removed and unaccounted for July 1, 1879.

	Number.	Number.
Cigars, at \$6 per M tax .....	1, 019, 375	
Cigarettes, at \$1.75 per M tax.....	7, 184, 500	
		8, 203, 875

2. Removed during the year ended June 30, 1880.

Cigars, at \$6 per M tax .....	2, 540, 825	
Cigarettes, at \$1.75 per M tax.....	41, 107, 380	
		43, 648, 205
		51, 852, 080

3. Exported and accounted for during the year ended June 30, 1880.

Cigars, at \$6 per M tax .....	2, 436, 600	
Cigarettes, at \$1.75 per M tax.....	27, 935, 600	
		30, 372, 200

4. Remaining unaccounted for June 30, 1880.

Cigars, at \$6 per M tax .....	1, 123, 600	
Cigarettes, at \$1.75 per M tax.....	20, 356, 280	
		21, 479, 880
		51, 852, 080

DATE OF BONDS REMAINING UNACCOUNTED FOR JUNE 30, 1880.

The years in which the bonds were given for the exportation of the tobacco, snuff, cigars, and cigarettes remaining unaccounted for by evidence of landing June 30, 1880 :

Year.	Tobacco.	Snuff.	Cigars.	Cigarettes.
	Pounds.	Pounds.	Number.	Number.
1872.....	17, 094. 00			
1873.....				
1874.....	25, 502. 00			
1875.....	74, 704. 00			
1876.....	178, 275. 00			10, 000
1877.....	275, 118. 00			
1878.....	150, 470. 00		47, 000	110, 000
1879.....	1, 050, 300. 00		137, 625	2, 904, 500
1880.....	3, 270, 241. 25		938, 975	17, 331, 780
Total.....	5, 041, 704. 25		1, 123, 600	20, 356, 280

AMENDATORY ACT REGULATING THE EXPORTATION OF TOBACCO,  
SNUFF, AND CIGARS IN BOND.

By an act of Congress passed during the latter part of the fiscal year, namely, on the 9th of June, 1880, section 3385 of the Revised Statutes, governing the exportation of manufactured tobacco, snuff, and cigars in bond, was amended so as to provide that export bonds which had been given or which should thereafter be given under the provisions of that section should be canceled upon the presentation to the collector of internal revenue of the detailed report from the inspector of customs and a certificate of the collector of customs at the port from which the goods are exported, that the goods removed from the manufactory under bond and described in the permit of the collector of internal revenue had been received by the said collector of customs, and that said goods were duly laden on a foreign-bound vessel, naming the vessel, and that the said merchandise was entered on the outward manifest of said vessel, and that said vessel and cargo were duly cleared from said port, and on the payment of the taxes on the deficiency, if any.

The effect of the amendment is to relieve exporters of tobacco, snuff, and cigars, exporting under the provisions of the law as amended, from the production of evidence showing landing of the goods at a foreign port. The law has not yet been sufficiently long in operation to show whether the release from the obligation to produce a landing certificate will be accompanied by a corresponding large increase of exportations. It, however, appears that in striking out a portion of section 3385, Revised Statutes, and substituting for the portion stricken out the amendatory provisions of the new law, the language of that part of section 3385 relied upon as authorizing the exportation of tobacco, snuff, and cigars by railroad cars or other land conveyances was, through inadvertence, not restored. I see no good reasons why the exportation of these articles under section 3385, as amended, should be confined to vessels, and I would therefore recommend that as early as possible in the next session of Congress the law be amended so as to clearly provide for the exportation of tobacco, snuff, and cigars by railroad or other land conveyances.

*Exportation of friction matches and proprietary articles under section 19 of the act of March 1, 1879.*

	Amount of tax.	Amount of tax.
1. Remaining unaccounted for June 30, 1879 .....	\$10, 146 24	
2. Bonded during the year ended June 30, 1880 .....	235, 512 46	
		\$245, 658 70
		245, 658 70
3. Accounted for as exported during the year .....	236, 412 94	
4. Remaining unaccounted for June 30, 1880 .....	9, 245 76	
		245, 658 70
		245, 658 70

OPERATIONS AT SPECIAL BONDED WAREHOUSES FOR STORAGE OF  
GRAPE BRANDY.

The following statement shows the quantity of grape brandy placed in special bonded warehouses, withdrawn therefrom, and remaini-

therein at the beginning and close of the fiscal year ended June 30, 1880, in taxable gallons:

	Gallons.	Gallons.	Gallons.
Remaining in warehouse July 1, 1879:			
First district of California.....	72, 561		
Fourth district of California.....	34, 523		
		107, 084	
Removed for exportation and unaccounted for July 1, 1879:			
First district of California.....		1, 974	
			109, 058
Produced and bonded during the year:			
First district of California.....	50, 229		
Fourth district of California.....	78, 857		
		129, 086	
Received in first district from fourth district of California.....		1, 151	
			130, 237
			239, 296
Exported and accounted for during the year:			
First district of California.....		2, 298	
Removed tax-paid during the year:			
First district of California.....	59, 982		
Fourth district of California.....	51, 738		
		111, 720	
Loss by regauge, act of May 22, 1880:			
First district of California.....	44		
Fourth district of California.....	35		
		79	
Removed from fourth district to first district of California.....		1, 151	
			115, 908
Removed for exportation and unaccounted for June 30, 1880:			
First district of California.....		439	
Remaining in warehouse June 30, 1880:			
First district of California.....	63, 157		
Fourth district of California.....	60, 456		
		123, 613	
			124, 052
			239, 296

The amount produced and bonded during the fiscal year ended June 30, 1880, was 59,746 gallons more than in the previous year, while the amount removed tax-paid was 15,430 gallons larger than in 1879. Of the quantity in warehouse June 30, 1880, 63,157 gallons were in the following-named warehouses in the first district of California:

	Gallons.
No. 1. Bode & Danforth, at San Francisco .....	39, 697
No. 2. Juan Bernard, at Los Angeles .....	15, 811
No. 3. G. C. Carlon, at Stockton .....	7, 649

and 60,456 gallons were in the following-named warehouses in the fourth district of California:

	Gallons.
No. 1. George Lichthardt, at Sacramento.....	26, 655
No. 2. J. F. Boyce, at Santa Rosa .....	15, 327
No. 3. R. A. Haskins, at Saint Helena.....	12, 704
No. 4. John Tivnen, at Sonoma.....	5, 770



## DRAWBACK.

## STATEMENT of DRAWBACK of INTERNAL REVENUE TAXES ALLOWED on EXPORTED MERCHANDISE during the fiscal year 1880.

Port of export.	No. of claims.	Proprietary articles.	Tobacco.	Cigars.	Permented liquors.	Stillls.	Machin-ery.	Total.
Baltimore.....	23	\$110 16	\$11,791 58	\$899 47	.....	.....	.....	\$12,801 21
Boston.....	31	1,134 90	352 80	.....	\$82 31	\$20 00	.....	1,590 01
Charleston.....	1	.....	6 00	48 00	.....	.....	.....	54 00
New York.....	708	33,033 68	1,690 00	.....	558 05	60 00	\$888 00	36,219 73
Philadelphia.....	13	809 60	154 88	60 00	.....	.....	.....	1,024 48
San Francisco.....	24	52 56	7,997 56	87 50	.....	.....	.....	8,137 62
Saint Louis.....	70	.....	.....	.....	1,565 06	.....	.....	1,565 06
Suspension Bridge	1	12 96	.....	.....	.....	.....	.....	12 96
Portland.....	1	.....	331 20	.....	.....	.....	.....	331 20
Total.....	872	35,153 86	22,314 02	1,094 97	2,205 42	80 00	888 00	61,726 27
Allowed, 1879.	744	43,184 71	12,113 86	250 20	533 69	*1,426 92	.....	57,509 38

\* Distilled spirits.

## OFFERS IN COMPROMISE.

The following statement shows the number of offers received and accepted in compromise cases, for the fiscal year ended June 30, 1880, with amount of tax, assessed penalty, and specific penalty accepted, as provided under section 3229 Revised Statutes:

Months.	Compromise offers—		Amount of tax.	Assessed penalty.	Amount of specific penalty	Total.
	Received.	Accepted.				
1879.						
July .....	74	99	\$15,198 00	\$50 00	\$2,355 73	\$17,004 42
August .....	53	15	51,700 99	100 00	645 00	52,445 99
September .....	65					
October .....	116	129	291 72	15 00	5,829 88	5,726 60
November .....	59	51	28,587 15	57 50	4,107 33	32,701 98
December .....	84	89	670 80	10 00	3,009 17	4,269 97
1880.						
January .....	91	85	\$2,004 66	\$3 75	4,922 55	\$7,110 96
February .....	125	71	1,341 51	68 75	2,648 58	4,058 84
March .....	159	86	11,337 91	65 00	6,389 90	17,792 81
April .....	94	93	32,587 00	91 25	3,456 63	36,134 88
May .....	61	98	24,310 99	37 50	5,048 25	29,396 74
June .....	69	75	532 20	48 33	1,510 40	2,090 93
Total.....	1,050	891	218,703 02	637 08	40,023 42	259,363 52

Whole number of offers received .....	1,050
Whole number of offers accepted .....	891
Amount of tax accepted.....	\$218,703 02
Amount of assessed penalty fixed by law.....	637 08
Amount of specific penalty, in lieu of fines, forfeitures, and penalties....	40,023 42
Total .....	259,363 52

## ASSESSMENTS.

The following table shows the assessments made by the Commissioner of Internal Revenue during the fiscal years ended June 30, 1879, ar

June 30, 1880, respectively, and the increase or decrease on each article or occupation :

Article or occupation.	Amount assessed during fiscal year ended—		Fiscal year ended June 30, 1880.	
	June 30, 1879.	June 30, 1880.	Increase over 1879.	Decrease from 1879.
Tax on deficiencies in production of distilled spirits .....	\$63, 574 50	\$73, 158 63	\$9, 584 13	.....
Tax on excess of materials used in the pro- duction of distilled spirits .....	5, 050 27	2, 829 97	.....	\$2, 220 30
Tax on deposits and capital of banks and bankers .....	3, 143, 302 64	3, 247, 998 90	104, 696 26	.....
Tax on circulation of banks and others .....	9, 242 62	461, 597 82	452, 355 20	.....
Tax on distilled spirits fraudulently removed or seized .....	126, 002 14	53, 312 18	.....	72, 689 96
Tax on fermented liquors removed from brewery unstamped .....	0, 144 33	877 75	.....	5, 266 58
Tax on tobacco, snuff, and cigars removed from factory unstamped .....	61, 917 45	88, 584 85	26, 667 40	.....
Tax on proprietary articles removed un- stamped .....	2, 614 95	1, 529 86	.....	1, 085 09
Assessed penalties .....	102, 235 72	93, 265 14	.....	9, 020 58
Legacies and successions .....	182, 036 71	135, 532 80	.....	46, 503 91
Unassessed and unassessable penalties, in- terest, taxes previously abated, conscience money, and deficiencies in bonded accounts which have been collected; interest tax on distilled spirits; also fines, penalties, and forfeitures, and costs paid to collectors by order of court, or by order of Secretary, and unassessable taxes recovered; also amount of penalties and interest received for validating unstamped instruments (Form 58) .....	401, 978 22	555, 315 50	153, 337 28	.....
Special taxes (licenses) .....	97, 068 91	59, 776 56	.....	27, 292 35
Tax on income and dividends .....	34, 539 54	40, 614 60	6, 075 06	.....
Total .....	4, 235, 758 00	4, 814, 394 56	578, 636 56	.....

It will be observed that a decrease has occurred in the assessment of the following taxes, viz: On excess of materials used in the production of distilled spirits; on distilled spirits fraudulently removed; on fermented liquors removed from the brewery unstamped; on proprietary articles removed unstamped; on assessed penalties; and on occupations (special taxes).

This indicates a better observance of the laws on the part of taxpayers, and a more prompt payment of their taxes.

The assessment of taxes on legacies and successions is under a law long since repealed, and in the nature of things such assessments must naturally decrease.

There has been an increase in (1) the assessments on deficiencies in the production of distilled spirits; (2) of the tax on tobacco, snuff, and cigars removed from factories unstamped; (3) on the capital and deposits of banks and bankers; (4) on the circulating notes of individuals and corporations; (5) taxes recovered by suit, and (6) on incomes and dividends.

As to the first two classes named the slight increase is not regarded as significant of increased violations of law, as the assessments are below the average.

An increase in the third class is a gratifying evidence of increased prosperity in the business of the banks and bankers of the country.

The increase in the fifth class arises mainly from collections of taxes on net earnings and gross receipts of railroad and other State corporations.

The following statement shows the amount of assessments in each of the several States and Territories of the United States during the fiscal year ended June 30, 1880 :

Alabama .....	\$33,402 91	Montana .....	\$4,129 60
Arizona .....	2,634 96	Nebraska .....	14,832 90
Arkansas .....	11,146 45	Nevada .....	11,485 22
California .....	392,448 72	New Hampshire .....	5,811 65
Colorado .....	25,787 56	New Jersey .....	55,709 17
Connecticut .....	59,620 93	New Mexico .....	1,211 21
Dakota .....	4,480 57	New York .....	1,132,572 61
Delaware .....	9,548 61	North Carolina .....	46,215 02
Florida .....	2,863 99	Ohio .....	224,013 85
Georgia .....	59,036 94	Oregon .....	11,091 96
Idaho .....	524 06	Pennsylvania .....	890,224 19
Illinois .....	214,091 02	Rhode Island .....	47,105 07
Indiana .....	114,086 33	South Carolina .....	11,840 52
Iowa .....	98,346 17	Tennessee .....	48,890 13
Kansas .....	32,280 53	Texas .....	55,534 95
Kentucky .....	290,072 52	Utah .....	33,078 75
Louisiana .....	112,912 06	Vermont .....	13,149 39
Maine .....	4,298 45	Virginia .....	79,233 66
Maryland .....	99,613 72	Washington .....	3,657 03
Massachusetts .....	77,710 14	West Virginia .....	32,789 66
Michigan .....	95,768 77	Wisconsin .....	84,750 29
Minnesota .....	35,036 89	Wyoming .....	2,463 88
Mississippi .....	17,648 64		
Missouri .....	211,202 91	Total .....	4,814,394 56

#### TABULAR STATEMENTS.\*

I append tabular statements to accompany the bound volume, as follows :

Table A, showing the receipts from each specific source of revenue, and the amounts refunded in each collection district, State, and Territory of the United States, for the fiscal year ended June 30, 1880.

Table B, showing the number and value of internal-revenue stamps ordered monthly by the Commissioner and from the office of the Commissioner; the receipts from the sale of stamps and the commissions allowed thereon; also the number and value of stamps for special taxes, tobacco, cigars, cigarettes, snuff, distilled spirits, and fermented liquors, issued monthly to collectors during the fiscal year ended June 30, 1880.

Table C, showing the percentages of receipts from the several general sources of revenue in each State and Territory of the United States to the aggregate receipts from the same sources, by fiscal years, from July 1, 1863, to June 30, 1880.

Table D, showing the aggregate receipts from all sources in each collection district, State, and Territory of the United States, by fiscal years, from September 1, 1872, to June 30, 1880.

Table E, showing the receipts in the United States from each specific source of revenue, by fiscal years, from September 1, 1862, to June 30, 1880.

Table F, showing the ratio of receipts in the United States from specific sources of revenue to the aggregate receipts from all sources, by fiscal years, from July 1, 1863, to June 30, 1880.

Table G, showing the returns of distilled spirits, manufactured tobacco, snuff, cigars, and cigarettes, under the several acts of legislation and by fiscal years, from September 1, 1862, to June 30, 1880.

Table H, showing the receipts from special taxes in each collection district, State, and Territory for the special-tax year ended April 30, 1880.

\* The tabular statements are omitted for want of space, but they are printed in the bound volumes of the Commissioner's report.

Table I. Abstract of reports of district attorneys concerning suits and prosecutions under the internal-revenue laws during the fiscal year ended June 30, 1880.

Table K. Abstract of seizures of property for violation of internal-revenue laws during the fiscal year ended June 30, 1880.

Very respectfully,

GREEN B. RAUM,  
*Commissioner.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

## REPORT OF THE COMPTROLLER OF THE CURRENCY.

TREASURY DEPARTMENT,  
OFFICE OF THE COMPTROLLER OF THE CURRENCY,  
*Washington, November 27, 1880.*

I have the honor to submit for the consideration of Congress the eighteenth annual report of the Comptroller of the Currency, in compliance with section 333 of the Revised Statutes of the United States.

Fifty-seven national banks have been organized since November 1, 1879, with an aggregate authorized capital of \$6,374,170, to which \$3,662,200 in circulating notes have been issued.

Three banks, having a total capital of \$700,000, have failed, and dividends amounting to sixty-five, eighty, and ninety per cent., respectively, have been paid to the creditors of these banks during the year and since the date of failure.

Ten banks, with an aggregate capital of \$1,070,000 and an aggregate circulation of \$928,800, have voluntarily discontinued business during the year; and one bank, which had formerly gone into liquidation, has been placed in the hands of a receiver for the purpose of enforcing the individual liability of the shareholders. The total number of national banks organized from the establishment of the national banking system, February 25, 1863, to November 1 of the present year, is 2,495. Of these, 314 have gone into voluntary liquidation by the vote of shareholders owning two-thirds of their respective capitals, and 86 have been placed in the hands of receivers for the purpose of closing up their affairs.

National banks are located in every State of the Union except Mississippi, and in every Territory except Arizona; and the total number in operation at the date last named was 2,095, which is the greatest number of banks that has been in operation at any one time.

The 13 States having the largest capital are Massachusetts, New York, Pennsylvania, Ohio, Connecticut, Rhode Island, Illinois, Indiana, Maryland, New Jersey, Maine, Kentucky, and Michigan, in the order named. The shares of the national banks which in the year 1876 numbered more than six and a half millions, and were held in average amounts of \$2,400, were then distributed among more than 208,000 persons residing in every State and Territory of the Union, in eleven countries or provinces of this continent and adjacent islands, and in twenty-five countries in Europe, Asia, and Africa.\*

Included in the aggregate number of national banks organized are ten national gold banks, three of which, still in operation, are located in the State of California, having an aggregate capital of two millions

\* Interesting information in reference to the distribution of national-bank stock will be found on pp. 69 and 144 to 148 of Comptroller's Report for 1876.

of dollars and a total circulation of \$840,000. Four of these banks have changed into other organizations under the act of February 14, 1880, which provided for such conversions.

A bill is now pending in Congress providing for the repeal of section 5176 of the Revised Statutes, which limited the amount of circulation to be issued to the national banks organized subsequently to July 12, 1870, to \$500,000, and also authorizing all national banks to issue circulation not exceeding the amount of their capital, upon the deposit of the necessary amount of United States bonds. The passage of this act will entitle all national banks to the same proportion of circulation upon capital and bonds as is possessed by those organized prior to March 3, 1865, and the passage of this bill is recommended.

The following table exhibits the resources and liabilities of the national banks at the close of business on the first day of October, 1880, the returns from New York City, from Boston, Philadelphia, and Baltimore, from the other reserve cities, and from the remaining banks of the country, being tabulated separately:

	New York City.	Boston, Philadelphia, and Baltimore.	*Other reserve cities.	Country banks.	Aggregate.
	47 banks.	101 banks.	83 banks.	1,839 banks.	2,090 banks.
<b>RESOURCES.</b>					
Loans and discounts .....	\$328,428,501	\$191,312,169	\$104,036,057	\$ 04,724	\$1,637,961,441
Overdrafts .....	00,825	95,770	314,757	38,474	2,812,000
Bonds for circulation .....	21,170,500	50,582,300	25,550,800	80,250	287,788,300
Bonds for deposits .....	520,000	550,000	3,509,500	47,500	14,887,000
U. S. bonds on hand .....	7,011,450	2,030,250	3,041,200	10,500	22,793,400
Other stocks and bonds .....	10,429,603	4,243,177	3,633,116	66,254	48,983,150
Due from reserve agents .....		20,278,079	21,913,471	71,228	184,863,779
Due from other national banks .....	14,191,525	13,145,804	9,374,611	11,857	63,023,797
Due from other banks and bankers .....	3,010,707	1,634,443	2,930,254	3,304,704	15,331,198
Real estate, furniture, and fixtures .....	10,048,431	6,989,071	4,798,084	20,210,247	48,045,833
Current expenses .....	1,045,085	709,375	679,264	3,892,458	6,386,182
Premiums .....	780,763	449,003	258,294	2,030,350	3,488,470
Checks and other cash items .....	2,444,390	1,075,684	882,530	6,320,392	12,729,002
Exchanges for clearing-house .....	94,520,210	18,939,203	0,132,142	503,690	121,096,250
Bills of other national banks .....	1,634,623	2,208,774	2,577,436	11,889,910	18,210,943
Fractional currency .....	48,368	28,996	62,974	236,814	887,179
Specie .....	59,783,555	18,368,959	10,001,177	21,192,818	109,346,509
Legal tender notes .....	8,728,703	6,937,458	12,963,367	27,613,370	56,644,488
U. S. certificates of deposit .....	1,310,000	2,655,000	2,050,000	840,000	7,655,000
Five per cent. redemption fund .....	940,537	2,544,723	1,101,572	11,334,907	15,921,741
Due from U. S. Treasury .....	411,283	99,021	108,748	562,973	1,182,136
<b>Totals .....</b>	<b>477,684,045</b>	<b>359,637,310</b>	<b>215,806,700</b>	<b>1,052,566,511</b>	<b>2,106,788,626</b>
<b>LIABILITIES.</b>					
Capital stock .....	50,050,000	78,748,330	37,505,500	280,500,155	437,558,085
Surplus fund .....	16,185,783	20,009,979	11,353,641	70,279,580	120,518,583
Undivided profits .....	10,296,437	4,900,959	4,125,305	24,658,998	44,180,699
National bank notes outstanding .....	18,594,915	50,102,858	22,270,008	226,381,632	317,350,003
State bank notes outstanding .....	47,483	46,221		177,342	271,046
Dividends unpaid .....	188,702	1,272,801	155,813	1,835,128	3,452,604
Individual deposits .....	242,014,723	146,070,901	85,724,947	397,168,067	873,537,637
U. S. deposits .....	276,099	247,687	1,965,654	4,999,190	7,548,530
Deposits of U. S. disbursing officers .....	182,118	8,284	800,749	2,394,325	3,344,367
Due to national banks .....	103,933,844	40,811,064	27,933,768	17,448,040	182,124,796
Due to other banks and bankers .....	31,234,350	14,275,452	20,075,304	10,150,572	75,735,677
Notes and bills re-discounted .....		502,937	302,705	2,371,570	3,178,200
Bills payable .....		1,780,757	1,094,875	2,155,972	5,091,005
<b>Totals .....</b>	<b>477,684,045</b>	<b>359,637,310</b>	<b>215,806,700</b>	<b>1,052,566,511</b>	<b>2,106,788,626</b>

\*The reserve cities, in addition to New York, Boston, Philadelphia, and Baltimore, are Albany, Pittsburgh, Washington, New Orleans, Louisville, Cincinnati, Cleveland, Chicago, Detroit, Milwaukee, Saint Louis, and San Francisco.



## COMPARATIVE STATEMENTS OF THE NATIONAL BANKS FOR ELEVEN YEARS.

The following table exhibits the resources and liabilities of the national banks for eleven years, at nearly corresponding dates from 1870 to 1880:

	Oct. 8, 1870.	Oct. 2, 1871.	Oct. 3, 1872.	Sept. 12, 1873.	Oct. 2, 1874.	Oct. 1, 1875.	Oct. 2, 1876.	Oct. 1, 1877.	Oct. 1, 1878.	Oct. 2, 1879.	Oct. 1, 1880.
	1, 615 banks.	1, 767 banks.	1, 919 banks.	1, 976 banks.	2, 004 banks.	2, 087 banks.	2, 089 banks.	2, 080 banks.	2, 053 banks.	2, 048 banks.	2, 090 banks.
<b>RESOURCES.</b>											
	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>
Loans .....	715.9	831.6	877.2	944.2	954.4	984.7	931.3	891.9	834.0	878.5	1, 041.0
Bonds for circulation	340.9	364.5	382.0	388.3	383.3	370.3	337.2	336.8	347.6	357.3	357.8
Other U. S. bonds...	37.7	45.8	27.6	23.6	28.0	28.1	47.8	45.0	94.7	71.2	43.6
Stocks, bonds, &c...	23.6	24.5	23.5	23.7	27.8	33.5	34.4	34.5	36.9	39.7	48.9
Due from banks....	109.4	143.2	128.2	149.5	134.8	144.7	146.9	129.9	138.9	167.3	218.5
Real estate .....	27.5	30.1	32.3	34.7	38.1	42.4	43.1	45.2	46.7	47.8	48.0
Specie .....	18.5	13.2	10.2	19.9	91.2	8.1	21.4	22.7	30.7	42.2	109.3
Legal-tender notes..	79.3	107.0	102.1	92.4	80.0	76.5	84.2	66.9	64.4	69.2	56.6
Nat'l bank notes....	12.5	14.3	15.8	16.1	18.5	18.5	15.9	15.6	16.9	16.7	18.2
C. H. exchanges ....	79.1	115.2	125.0	100.3	109.7	87.9	100.0	74.5	82.4	113.0	121.1
U. S. cert. of deposit.	.....	.....	6.7	20.6	42.8	48.8	29.2	33.4	32.7	26.8	7.7
Due from U. S. Treas	.....	.....	.....	.....	20.3	19.6	16.7	16.0	16.5	17.0	17.1
Other resources ....	66.3	41.2	25.2	17.3	18.3	19.1	19.1	28.7	24.9	22.1	23.0
Totals.....	1, 510.7	1, 730.6	1, 755.8	1, 830.6	1, 877.2	1, 882.2	1, 827.2	1, 741.1	1, 767.3	1, 868.8	2, 105.8
<b>LIABILITIES.</b>											
Capital stock .....	430.4	458.3	479.6	491.0	493.8	504.8	499.8	479.5	466.2	454.1	457.6
Surplus fund .....	94.1	101.1	110.3	120.3	129.0	134.4	132.2	122.8	116.9	114.8	120.5
Undivided profits ..	38.6	42.0	46.6	54.5	51.5	53.0	46.4	44.5	44.9	41.3	46.1
Circulation .....	293.9	317.4	335.1	340.3	334.2	319.1	292.2	291.9	301.9	313.8	317.3
Due to depositors...	515.2	631.4	628.9	640.0	683.8	679.4	666.2	630.4	668.4	736.9	887.9
Due to banks .....	130.1	171.9	143.8	173.0	175.8	179.7	179.8	161.6	165.1	201.2	267.9
Other liabilities .....	8.4	8.5	11.5	11.5	9.1	11.8	10.6	10.4	7.9	6.7	8.5
Totals.....	1, 510.7	1, 730.6	1, 755.8	1, 830.6	1, 877.2	1, 882.2	1, 827.2	1, 741.1	1, 767.3	1, 868.8	2, 105.8

## THE BANKS SINCE RESUMPTION.

The movement of the currency and the operations of the banks have never been more interesting than during the months which have intervened since the resumption of specie payments. To most of the political economists of this and other countries the resumption of coin payments by the United States at the time fixed by law, and its successful maintenance, were deemed almost impossible. No country had ever before successfully maintained payments in coin with so large a volume of currency outstanding, or with an amount of currency greatly in excess of its coin. Even those who were known to be earnestly in favor of resumption, both in and out of Congress, doubted the ability of the government and of the banks to commence and continue coin payments without a preparatory reduction of the amount of notes in circulation. They said, truthfully, that no nation maintains at par a convertible paper currency which has not in its banks or among its people an equal amount of coin, and that, if successful, the United States would be an exception, and the only exception in this respect, among commercial nations. But the resumption act giving authority for the purchase of coin in the markets of the world with United States four, four and one-half, or five per cent. bonds made resumption certain, if the bonds for a sufficient amount could be readily marketed at not less than par, as authorized by law. Purchasers for the bonds were promptly found, and resumption



came so easily that many persons now believe it could have been as well accomplished one year earlier, if Congress had fixed upon January 1, 1878, instead of upon the following New Year's day.

Since the date of resumption the country has been month by month growing richer in coin, not by the sales of bonds, which have been rapidly increasing in value, but by the production of the mines and the influx of specie in return payment for the excess of exports of our abundant products over our imports. The whole country has become so habituated to the use of paper money that the difficulty has been—not to provide means for its payment, for scarcely a dollar has been demanded—but to supply the people with Treasury and national-bank notes, which have been almost universally preferred.

For many years past, large amounts of currency have been annually drawn from the banks of the city of New York by the banks in the interior, for the purchase and shipment of grain and other products. The banks in the West and South supply the grain-buyers with money, who pay it to the farmers, and by them it is disbursed to the country merchants. It then goes to the wholesale merchants in the larger cities of the interior, by whom it is deposited in the banks and returned again to the money centers in the Eastern States. Thus the money which was paid out in the fall returns again to the city of New York long before midwinter, whereby much of the currency of the country, instead of continuing to circulate, accumulates in the New York banks both before and after the time for the large movements of produce.

This ebb and flow of the currency continued yearly up to the time of the great harvest of 1879. The drain of coin and currency from the large cities, amounting to more than 100 million dollars during the fall of that year, made currency scarce in New York notwithstanding the unprecedented influx of gold from abroad. The usual return of the currency in the winter was expected, but did not occur.

The experience of 1879 was considered exceptional, but another year has nearly passed and the experience of the former year has been, to a considerable extent, repeated. A large portion of the avails of produce has been retained, either for the liquidation of debts, for employment in trade and commerce at home, or in the many new and extensive enterprises for which the West is distinguished, where there would appear to be no limit for the safe and profitable employment of capital. The coin in the banks has increased from 41 millions on January 1, 1879, to 109 millions on October 1, 1880. The Treasury holds its immense hoard of gold, not surpassed in amount by any other depository in the world.

The merchant, the manufacturer, and the farmer are alike prosperous; the people have paid their debts to an unprecedented degree, and hold their earnings in the paper currency of the government and of the banks in larger amounts than have hitherto been known. The receipts of the government have been so large that, after refunding many millions of 5 and 6 per cent. bonds into 4 per cents., it has still been able during the year to purchase in the market at a premium more than 100 millions of its bonds for cancellation. The deposits of the banks have everywhere increased, and money has been abundant wherever business or investment has invited capital, and there has probably never been a period when it has generally commanded so low a rate of interest as during the last two years.

The rate at the Bank of England and the Bank of France has, for a considerable portion of this period been  $2\frac{1}{2}$  per cent. The English consols have for the first time in twenty-seven years advanced to par, while the rate for call loans in London has at times been at what may be termed

the infinitesimal rate of from one-half to seven-eighths of one per cent. per annum. Low rates have also prevailed in this country. In New York for some months past money at call, upon the best collaterals, could be obtained at from 2 to 3 per cent. The average rate upon first-class commercial paper during the fiscal year of 1879 was 4.4 per cent., while the average rate during the succeeding fiscal year has been 5.3 per cent., owing not to natural but to artificial causes. The rate, however, for first-class mercantile paper in the past four months has been from 4 to 4½ per cent. Low rates have prevailed, not only in New York City, where money is not unfrequently borrowed upon good collaterals for speculative purposes, but also throughout the country, including many places where money has heretofore been loaned, if at all, at usurious rates. The rates during the past year on large transactions in first-class commercial paper have been: In Philadelphia 3 to 5 per cent.; Boston and Baltimore, average 5; Washington, 7; Chicago, 4 to 7; Saint Louis, 5 to 7; Milwaukee, 6 to 8; Cincinnati, 6 to 7; Cleveland, 6 to 8; Saint Paul, 8 to 10; Omaha, 10; Denver, 10 to 15; San Francisco, 8; California (country), 9 to 12; Louisville, 6 to 7; Richmond, 7; Charleston, 7 to 8; Savannah, 8; Selma, average 9; Atlanta, 10; New Orleans, 4 to 6. Rates at nearly every point are less than for previous years.

The borrowing power of the government for a considerable portion of the year has been at 3½ per cent., and that of many of the leading States and cities 4 per cent. The legal rate in the State of New York has been reduced from 7 to 6 per cent. There has also been a large reduction in rates at remote points, which, until recently, have been considered upon the frontier. Many seven per cent. railroad bonds were until recently placed with difficulty, even at a discount; now six per cent. bonds, upon lines at more remote points, are, in many instances, sold at par. In portions of the country the rates for loans upon real estate are higher than for business paper. In some of the Southern States it is difficult to loan money upon real estate, on account of the legal obstacles in the way of collecting it. The highest prevailing rates are found in the country districts of the South, but it is now believed they will be gradually reduced, both by the increasing value of its productions and by the introduction of foreign capital to be employed in manufactures, which have already been introduced with great success. In large districts of the West, where formerly money could not be readily obtained upon real estate, the number of borrowers is much less, and the demand by no means equal to the supply of funds seeking investment in that class of securities. Such loans are now regarded not only as desirable investments, so far as security is concerned, but are made at a much less rate of interest than formerly. The rates in New York are subject to frequent changes, not only on account of the importation of coin, the drain in payment for produce from the interior, and the purchase of bonds by the government, but by the influx of foreign capital seeking employment in consequence of the prevailing depression in business elsewhere. If the rates are favorable, large amounts of money are placed by cable by residents in foreign countries, and by telegraph between remote points in our own country, with as much certainty and safety as by the use of bills of exchange or by the movement of coin itself. So reliable has this means of transfer become that not only are payments thus made at home and abroad, but large sales of breadstuffs and other products are accomplished by parties in the interior cities without the intervention of agents at the sea-ports, thus shortening the time of bills drawn upon shipments of products.

Many men who were formerly borrowers have become lenders; and numerous lenders now seek investment in government bonds and other securities which yield much less than the legal rate of interest.

The abundance of money and the low rates of interest have made it difficult for capitalists to find satisfactory investments and have led the Comptroller to examine the statements of the banks for a series of years in order to compare their ratios of loans to their means, and to ascertain if, during the past two years, they have found use for their increased deposits.

In order to show this, the following table is given, which exhibits concisely the ratios of the loans of the banks to their capital, surplus, and net deposits, and the ratios of specie and legal-tender notes to net deposits, in New York and in the group of other principal cities separately, at corresponding dates from 1870 to 1880, inclusive:

## NEW YORK CITY.

Dates.	No. of banks.	Loans.	Capital.	Surplus.	Net deposits.	Specie.	Legal-tender notes and U. S. certificates.	Ratios of—	
								Loans to capital, surplus, and net deposits.	Cash to net deposits.
		Millions.	Millions.	Millions.	Millions.	Millions.	Millions.	Per cent.	Per cent.
October 3, 1870 .....	54	168.1	73.4	18.8	159.8	9.1	45.8	66.7	34.4
October 3, 1871 .....	54	198.9	73.2	19.5	191.3	8.7	50.4	70.0	30.9
October 3, 1872 .....	50	183.4	71.3	20.9	158.0	6.4	39.0	73.3	28.7
Septem. 12, 1873 .....	48	199.3	70.2	21.9	172.7	14.6	32.3	75.2	27.2
October 2, 1874 .....	48	202.2	68.5	22.7	204.6	14.4	52.4	68.4	32.6
October 1, 1875 .....	48	202.4	68.5	22.5	202.3	8.0	54.5	69.0	29.4
October 2, 1876 .....	47	184.3	68.4	18.9	197.9	14.6	48.3	65.1	30.8
October 1, 1877 .....	47	169.3	57.4	16.6	174.9	12.9	34.3	62.0	27.6
October 1, 1878 .....	47	169.7	53.8	15.9	189.8	12.8	34.5	65.4	26.2
October 2, 1879 .....	47	190.0	50.7	16.0	210.2	12.4	32.6	70.8	24.7
October 1, 1880 .....	47	232.5	50.7	18.2	268.1	50.8	11.0	70.8	24.4

## OTHER RESERVE CITIES.

		Millions.	Millions.	Millions.	Millions.	Millions.	Millions.	Per cent.	Per cent.
October 3, 1870 .....	159	194.1	112.0	26.5	147.5	3.0	38.5	67.9	22.1
October 3, 1871 .....	174	230.7	119.9	28.3	187.5	1.5	42.5	68.7	22.5
October 3, 1872 .....	180	242.0	124.9	29.8	179.6	1.9	36.7	72.4	21.5
Septem. 12, 1873 .....	181	263.1	127.2	32.5	197.6	3.2	36.3	73.6	20.0
October 2, 1874 .....	182	272.5	127.1	35.2	219.9	4.4	36.7	71.3	18.7
October 1, 1875 .....	183	279.3	128.8	37.0	222.9	1.5	37.1	71.9	17.3
October 2, 1876 .....	180	264.7	127.9	37.4	216.3	4.0	37.1	69.4	18.0
October 1, 1877 .....	188	254.3	123.7	33.1	203.4	5.6	34.4	70.6	19.7
October 1, 1878 .....	184	261.2	119.2	30.8	199.2	2.4	28.5	68.3	19.5
October 2, 1879 .....	181	244.4	115.4	30.3	228.3	11.3	33.0	65.4	19.4
October 1, 1880 .....	184	295.8	116.3	32.0	263.8	23.3	25.0	67.7	18.6

If the ratios of the loans of the banks in New York City to their capital, surplus, and net deposits be examined, it will be found that in October of 1879 and 1880 they were 70.8 per cent., in 1878 but 65.4 per cent., in 1877 but 68 per cent., and in 1876 65.1 per cent.; and that the loans are now proportionately higher than at any time since 1873. The means of the banks in Boston and the other reserve cities were more fully employed in October than they were at the corresponding dates for the two previous years, though the business of the banks was not as much extended as it was during the four years following the crisis of 1873.

It will surprise those whose attention has not heretofore been called to the subject to find how closely the means of the banks in the commercial cities have been employed during the last eleven years, notwithstanding the variations in rates of interest, and particularly during the last two years, when money has been so abundant and the deposits have

so rapidly increased. It will be seen that prior to 1876, with the exception of a single year, the loans in New York exceeded the net deposits, while since that time, though there has been considerable variation, the net deposits have been somewhat in excess of the loans at the dates given. In the other principal cities, which continually keep large amounts of money in New York subject to demand, and thus diminish their own net deposits as given in the above table, the loans have always largely exceeded their deposits. The same remark is more emphatically true of the banks in the country districts which have in New York, as well as in other cities, large amounts of money on deposit subject to call. The capital of this class of banks is also much larger as compared with their deposits than is that of the banks in the large cities, and their loans therefore relatively greater.

The ratio of the loans of this group of banks to their capital, surplus, and net deposits will be seen in the statement below, which also includes a table showing the loans, capital, surplus deposits and cash reserves of all the national banks of the United States:

## STATES AND TERRITORIES.

Dates.	No. of banks.	Loans.	Capital.	Surplus.	Net deposits.	Specie.	Legal-tender notes and U. S. certificates.	Ratios of—	
								Loans to capital, surplus, and net deposits.	Cash to net deposits.
		Millions.	Millions.	Millions.	Millions.	Millions.	Millions.	Per cent.	Per cent.
October 8, 1870 .....	1,403	353.7	245.0	48.8	216.2	2.4	38.4	69.4	18.9
October 2, 1871 .....	1,539	402.0	265.1	53.3	257.8	1.8	41.6	69.8	16.8
October 3, 1872 .....	1,689	451.8	283.4	59.6	282.1	1.9	43.3	72.3	16.0
Septem. 12, 1873 .....	1,747	481.8	293.7	65.9	303.1	2.1	44.5	72.7	15.4
October 2, 1874 .....	1,774	479.7	298.2	71.1	292.8	2.4	33.7	72.5	12.3
October 1, 1875 .....	1,851	503.0	307.5	74.9	306.7	1.6	33.7	73.0	11.5
October 2, 1876 .....	1,853	482.3	305.5	75.9	291.5	2.8	31.0	71.7	11.6
October 1, 1877 .....	1,845	468.3	298.4	73.1	289.4	4.2	31.6	70.9	12.4
October 1, 1878 .....	1,822	433.1	293.1	70.2	288.3	8.0	31.1	66.5	13.6
October 2, 1879 .....	1,820	438.1	288.0	68.5	329.3	11.5	30.4	63.9	12.7
October 1, 1880 .....	1,859	506.7	290.6	70.3	410.3	21.2	28.3	65.7	12.1

## UNITED STATES.

		Millions.	Millions.	Millions.	Millions.	Millions.	Millions.	Per cent.	Per cent.
October 8, 1870 .....	1,615	715.9	430.4	94.1	523.5	14.5	122.7	68.3	26.3
October 2, 1871 .....	1,767	831.6	458.2	101.1	636.6	12.0	134.5	69.5	23.0
October 3, 1872 .....	1,919	877.2	479.6	110.3	619.8	10.2	119.0	72.5	20.8
Septem. 12, 1873 .....	1,976	944.2	491.1	120.3	673.4	19.9	113.1	73.5	19.8
October 2, 1874 .....	2,004	954.4	493.8	129.0	717.3	21.2	122.8	71.2	20.0
October 1, 1875 .....	2,087	984.7	504.8	134.4	731.9	8.1	125.8	71.8	18.2
October 2, 1876 .....	2,089	931.8	499.8	132.2	705.7	21.4	113.4	69.6	19.1
October 1, 1877 .....	2,080	891.9	479.5	122.8	667.7	22.7	100.3	70.2	18.4
October 1, 1878 .....	2,053	834.0	466.1	116.9	677.3	30.7	97.1	66.2	18.9
October 2, 1879 .....	2,048	878.5	454.1	114.8	767.7	42.2	96.0	65.7	18.0
October 1, 1880 .....	2,090	1,041.0	457.6	120.5	967.2	109.3	64.3	69.3	17.9

The ratios of the loans of the banks in the country districts were, on October 1, last, 7.3 per cent. less than at the corresponding dates in 1875, and 5.2 per cent. less than in 1877. The opportunities for using money in this group of banks are not in proportion to the increase of deposits, and their balances in other banks have by no means diminished.

It will be seen that the loans of the banks now exceed 1,041 millions, which is 207 millions more than at the corresponding date in 1878, while the capital and surplus at the previous date was 5 millions in excess of the present amount. The net deposits in the same period increased nearly 290 millions, and the total individual and bank deposits,

not deducting the amount due from banks and the clearing-house exchanges, more than 322 millions, amounting to the large and unprecedented sum of 1,155 millions, as may be seen from a previous table.

The following table gives a classification of the loans of the banks in the city of New York, in Boston, Philadelphia, and Baltimore, and in the other reserve cities, for the last two years, at the dates of their reports in the month of October:

1879.

Classification.	New York City.	Boston, Philadelphia, and Baltimore.	Other reserve cities.	Country banks.	Aggregate.
	47 banks.	99 banks.	82 banks.	1,820 banks.	2,048 banks.
On U. S. bonds on demand.....	\$8, 286, 525	\$2, 017, 226	\$4, 360, 523	.....	\$14, 664, 274
On other stocks, bonds, &c., on demand .....	78, 062, 085	22, 605, 795	11, 445, 079	.....	112, 112, 959
On single-name paper without other security.....	22, 491, 926	13, 136, 911	7, 150, 239	.....	42, 779, 076
All other loans .....	87, 011, 366	118, 267, 128	65, 023, 494	\$435, 154, 810	705, 456, 798
<b>Totals.....</b>	<b>195, 851, 902</b>	<b>156, 027, 060</b>	<b>87, 979, 335</b>	<b>435, 154, 810</b>	<b>875, 013, 107</b>

1880.

	47 banks.	101 banks.	83 banks.	1,859 banks.	2,090 banks.
On U. S. bonds on demand.....	\$3, 915, 077	\$525, 445	\$1, 378, 168	.....	\$5, 818, 690
On other stocks, bonds, &c., on demand .....	92, 630, 982	30, 838, 692	16, 558, 260	.....	140, 027, 934
On single-name paper without other security.....	27, 755, 152	22, 542, 776	10, 402, 295	.....	60, 700, 223
All other loans .....	114, 127, 290	137, 405, 246	75, 687, 334	\$503, 294, 724	830, 514, 594
<b>Totals.....</b>	<b>238, 428, 501</b>	<b>191, 312, 159</b>	<b>104, 026, 057</b>	<b>503, 294, 724</b>	<b>1, 037, 061, 441</b>

In this table will be seen—what would be expected from a large increase in the clearing-house exchanges, which are 38 millions more than in 1878, and larger than at any time since 1873—a large increase in loans upon stocks and bonds payable on demand. Much of this increase is due to operations at the stock board, which are always most buoyant in prosperous times; but a considerable portion may be due to loans made to banks and bankers in the interior upon collateral security, at rates so low as to leave room for profit in relending to their own dealers.

The amount invested by the banks in United States and other stocks and bonds is more than 92 millions of dollars, as may be seen in a previous table, which fact is evidence either of a difficulty in obtaining satisfactory loans or of a preference for such temporary investments.

When the rates of interest are low there is danger that bank managers, in their desire to use their available means, may be induced to loan upon securities which are not of the best character, and thus in the end diminish rather than increase their earnings. The loans were at the highest point in the year 1875, and the two previous years, and the national banks were then enthusiastic over the high rates of interest, their large deposits, and their large earnings and dividends; but the delusion has been dispelled by the enormous losses which they have been obliged to charge off during the past five years, reaching the ext-



ordinary sum of 100 millions, which were largely the result of overtrading during the period when gold coin was a commodity, and the legal standard a promise to pay, unfulfilled and fluctuating in value for seventeen years. The great losses experienced during these years, which will not soon be forgotten, enforce the principle that no legitimate business is safe which is conducted upon a varying standard of value; and the crisis of 1873 will always be remembered as a striking example of the evil results arising from business conducted during "good times" upon a fictitious basis.

The amount of legal cash reserve required of the banks in New York City is 25 per cent. of their deposits, of the banks in the other reserve cities one-half of this ratio, and of the banks in the country districts six per cent. of their deposits. The amount required has in the aggregate always been held, except in a single instance in the city of New York, during the last ten years (without including the redemption fund in the Treasury), by the three different groups of national banks; but the aggregate amount in the city of New York has been at times very close, and particularly during the last three years, and some banks have frequently, if not habitually, expanded their loans beyond reasonable limits, relying upon imports of gold or purchases of bonds by the Treasury to replenish their deficient reserves.

The banks in the interior, if we consider their large deposits elsewhere, are as a rule found to be much stronger in available means than the banks in New York City; while the reverse of this should always be true when such large balances, amounting to more than 100 millions of the funds of other banks, are constantly on deposit in the latter city subject to demand.

The imports of gold in excess of exports, from the date of resumption to November 1, 1880, have been \$119,384,795,\* and the estimated gold production of the mines is \$67,449,929; in all, \$186,834,724. During this period the gold in the Treasury has increased \$20,976,007, and in the banks \$73,976,149, and the remainder, \$91,882,568, has been dispersed throughout the country or used in the arts.

The amount of currency and coin in the country is known to be much greater than at any former time, and its distribution, together with its partial disappearance from the money-centers, has been an interesting subject for discussion.

Tables are herewith given showing the amount of coin and currency in the country on January 1 and November 1, 1879, and on November 1 of the present year; the amounts of silver and gold coin, which include the bullion in the Treasury, being the estimates of the Director of the Mint:

	January 1, 1879.	November 1, 1879.	November 1, 1880.
Legal-tender notes .....	\$346, 681, 016	\$346, 681, 016	\$346, 681, 016
National-bank notes .....	323, 791, 674	337, 181, 418	343, 834, 107
Gold coin .....	278, 310, 126	355, 681, 532	454, 012, 030
Silver coin .....	106, 573, 803	126, 009, 537	158, 271, 327
Total.....	1, 055, 356, 619	1, 165, 553, 503	1, 302, 708, 480

The amount of Treasury notes has remained the same since January 1, 1879, as provided by law. There was an increase of bank notes for the first ten months of 1879 of \$13,389,744, and for the present year of

\* Not including imports outside of New York City in October of this year.



**\$6,652,689.** The total net increase of national-bank notes issued since resumption is \$20,042,433, and the total increase of gold \$175,701,904 and of silver \$51,697,524. The statement below gives the amount of currency and coin in the Treasury at the same dates as in the previous tables, and the amount in the national banks, on the dates of their returns nearest thereto—namely, January 1 and October 2, 1879, and October 1, 1880, respectively. The amount given for the State banks and trust companies and the savings banks is at the nearest comparative dates of their official reports. The banks in the State of California report their coin and currency in the aggregate, and in this table the coin is estimated to be three-fourths of the total amount and the currency one-fourth.

	January 1, 1879.	November 1, 1879.	November 1, 1880.
<b>Gold</b> —In the Treasury, less certificates .....	\$112, 703, 342	\$156, 907, 986	\$133, 679, 349
In National banks .....	35, 039, 201	37, 187, 238	102, 851, 032
In State banks .....	10, 937, 812	12, 171, 292	17, 102, 130
<b>Total gold</b> .....	<b>158, 680, 355</b>	<b>206, 266, 516</b>	<b>253, 632, 511</b>
<b>Silver</b> —In the Treasury, standard silver dollars .....	17, 249, 740	32, 115, 073	47, 156, 588
In the Treasury, bullion .....	9, 121, 417	3, 824, 931	6, 185, 000
In the Treasury, fractional coin .....	6, 048, 194	17, 854, 327	24, 635, 561
In National banks, including certificates .....	6, 460, 557	4, 986, 492	6, 495, 477
<b>Total silver</b> .....	<b>38, 879, 908</b>	<b>58, 780, 823</b>	<b>84, 472, 626</b>
<b>Currency</b> —In the Treasury .....	77, 615, 655	41, 906, 376	26, 846, 826
In National banks .....	126, 491, 720	118, 546, 369	86, 439, 925
In State banks .....	25, 944, 485	25, 555, 280	25, 828, 794
In savings banks .....	14, 513, 779	15, 880, 921	17, 072, 680
<b>Total currency</b> .....	<b>244, 565, 639</b>	<b>201, 888, 946</b>	<b>156, 188, 225</b>
<b>Grand totals</b> .....	<b>442, 125, 902</b>	<b>466, 936, 285</b>	<b>494, 293, 362</b>

The silver certificates, of which \$1,165,120 was held by the national banks and the remaining \$18,615,121 was in circulation on November 1, 1880, are not included in the above exhibit.

If from the amount of coin and currency in the country, as given in the first table, the amount in the Treasury and the banks be deducted, the remainder will give the amount of each kind then in the hands of the people outside of these depositories, as follows:

	January 1, 1879.	November 1, 1879.	November 1, 1880.
<b>Gold</b> .....	\$119, 629, 771	\$140, 415, 016	\$200, 379, 519
<b>Silver</b> .....	67, 693, 895	67, 228, 714	73, 798, 701
<b>Currency</b> .....	425, 907, 051	481, 073, 488	534, 326, 898
<b>Totals</b> .....	<b>613, 230, 717</b>	<b>698, 617, 218</b>	<b>808, 505, 118</b>

The gold in the Treasury has increased \$20,976,007, and in the banks \$73,976,149, releasing \$50,768,829 of paper currency in the Treasury and \$37,608,585 in the banks. The increase of gold outside of the Treasury and the banks is 80.7 millions and of paper currency 108.4 millions. The amount of standard dollars coined is \$72,847,750, of which \$47,156,588 are in the Treasury and \$25,691,162 in circulation. The remainder

the silver, \$85,423,577, is subsidiary and trade dollars, and bullion, of which \$30,820,561 is in the Treasury and \$54,603,016, is in use in place of the previous fractional paper currency which, on March 23, 1874, was at its highest point, and amounted to \$49,566,760. The additional amount of gold coin, of silver dollars, and paper currency outside of the Treasury and the banks is thus estimated to be \$195,274,401, which amount has been dispersed among the people since the date of resumption.

The average prices and value of manufactured goods, of breadstuffs, of provisions, and of other products have largely increased. The laborer has been steadily employed at remunerative wages. The frontier has rapidly receded. All classes of people have been liquidating their debts, and much greater amounts of money have been held in the tills of country traders and at home for ready use. The hoarding of a small amount by each of fifty millions of people, or by ten millions of families, is of itself sufficient to account for the disappearance from the usual places of deposit of a large portion of the addition to the circulating medium since the date of resumption.

The most gratifying exhibit in the above statement is the fact that the national banks are now doing business upon a specie basis and with a true standard. For the ten years preceding the resumption of specie payments the average amount of coin held by the banks was but \$26,303,309, and all but \$8,540,252 of this amount was held by the banks in the city of New York. The amount of coin held has, of course, at times largely exceeded this average, as on January 20, 1877, when it was more than 49 millions. But this amount was soon reduced, and in the following April it had fallen to 27 millions, the previous increase having been due chiefly, not to deposits of dealers or payments on loans, but to disbursements of interest by the government. At other times the banks have held much less than the average amount stated. For instance, on October 1, 1875, they held but \$8,050,329, of which the banks in the city of New York held but \$4,955,624, and on May 1 of the same year they held but \$10,620,361, of which the banks in the city of New York held \$6,683,325. This was at the time when both the paper issues of the government and the circulation of the banks were at their highest amounts, the former being 428 millions and the latter 354 millions, in all, 782 millions, while the proportion of coin to their circulation then held by the banks was only about three per cent.

One year ago it was urgently recommended "that all the national banks should take advantage of the present influx of gold to accumulate in their vaults an amount equal to the total cash reserve required by law," and the hope was then expressed "that the reports of another year might show them to be possessed of at least 100 millions in gold coin." On June 14 of the present year the banks reported 99 millions of specie, and on October 1 more than 109 millions of coin (including nearly six and one-half of silver), which more than equals one-third of the total circulation of the banks in operation. The amount of gold coin now held is but 18 millions less than the whole cash reserve required, and would undoubtedly have been still greater except for the high rates charged for the transportation of gold coin, which are greatly disproportioned to the cost of moving paper currency and which, it is to be hoped, will, by some means, be largely reduced.

Much newspaper criticism has appeared in the mean time, complaining of the comparatively small amount of legal-tender silver dollars held by the banks, and some of the banks have themselves encouraged this

criticism. The arguments used in favor of the accumulation of silver under existing laws are unsound in principle and against all experience. No one prefers to put away for future use a product which will spoil by lapse of time, or which will deteriorate in value. The banks, if well managed, will transact business upon the same general principles as those on which an individual of superior judgment would conduct his own affairs, holding in reserve that coin which is known to be of uniform value everywhere in preference to that which, by the operation of the laws of trade or business, will be likely to become of less value. The law compels the citizen and the corporation to receive all legal-tender money in payment of debts; but it does not, and ought not to, require any one to receive on deposit that which will not as readily be received in turn by the depositor.

The Bank of France on January 1, 1877, as will be seen in a subsequent table, held 306 million dollars of gold and 127 millions of silver, or seventy-one per cent. of gold and twenty-nine per cent. of silver. On November 4, 1880, it held \$113,855,000 of gold and \$365,929,000 of silver, or twenty-four per cent. of the former and seventy-six per cent. of the latter, having lost in the interval 192 millions of gold and gained 239 millions of silver, thus very nearly reversing the percentage of each; and it is said that about 70 millions of this amount is distributed among the 90 branches of the Bank, and adds but little to the strength of the reserve of the parent bank.\* Since September 23 last, while its circulation was 475 million dollars, and its deposits 115 millions, it has lost \$31,300,000 of gold. "During a part of this time it has endeavored to check the demand for export by various expedients, without raising the rate of discount. Gold was offered by the Bank in pieces of ten francs, in coins not of full weight, and other restrictive measures were adopted. Gradually the inutility of these expedients became obvious. The drain of gold still continued. The Bank then proceeded to employ the only efficacious method of protecting the reserve, and raised the rate of discount. At the same time it removed all restrictions on the issue of coin. This also had a good effect. \* \* \* Confidence in fact was restored by following the ordinary rules of business, and the first of these rules is, that the price of an article should follow its demand."†

France is fast traveling the road open for all nations who try to maintain a double standard where the intrinsic value of gold and silver coin is widely at variance. Sooner or later the time will come when the creditors of the Bank will prefer payment in the dearer metal, and the refusal to pay the kind of coin asked for by the creditor who has the option will bring down the cheaper coin to its value in the markets of the world. Then the Bank must replenish its store by selling its bonds under disadvantageous circumstances or remain permanently upon the silver basis.

The United States is at the present time in a similar situation to the Bank of France, except that its liabilities are less and its store of gold somewhat greater. On September 30, 1877, the Treasury held 107 millions (\$107,039,529) of gold and nearly seven and one-half millions of silver (\$7,425,454), or ninety-three and one-half per cent. of the former and six and one-half per cent. of the latter. On November 1, 1880, it held in all 141 millions of gold (\$141,133,849), including \$7,454,500 held for the redemption of certificates outstanding, and 77 millions of silver (\$77,977,149), or sixty-four per cent. of gold and thirty-six per cent. of silver. Everything is favorable at the present time, but the operation

\* The Public, November 18, 1880.

† London Economist, Nov. 6, 1880.

of laws now in force will continue to reduce the gold and increase the silver. The government, by trying to force silver upon the holder of bonds matured, or in payment of legal-tender notes—thereby assuming that the silver dollar is not the equal of the gold dollar—and by taking the option away from the holder of the note, may any day bring the nation upon the silver standard, which will at once advance the price of all products, and place gold at such a premium that an investment in it at par would be at least twice as profitable as in United States bonds. Such a situation is not satisfactory to any intelligent business man, and no effort should be spared to enlighten the people upon the silver question and to effect the repeal of the present law. The banks as a class have no prejudice against silver coin other than that occasioned by its inconvenience. If Congress shall, by wise legislation, diminish the issue of small notes, and restrict the silver coinage within judicious limits, the standard silver dollar will do good service, and soon accumulate in bank vaults and find its way into general circulation. If not, it is wisdom on the part of bank officers, who act for the interest of their stockholders, to keep their reserves and all their ready means as nearly as possible in gold coin.

This brief outline of some of the transactions of the national banks covers the most important period of the financial history of the country, and shows the immense advantage experienced by this country from having, during the years following the great war, an excellent banking system. The system was established, not for the benefit of the stockholders of the banks, but for the benefit of all the people. Its ample basis of unimpaired capital, its large surplus, its large cash reserves, its secured circulation, its protection to depositors, and its general management, must commend it to every student of political economy; and it is among the most gratifying of political signs that during the late exciting campaign, while both parties have claimed the credit of having brought about a return to specie payments, neither party has urged the abolishment of the system. The national banks have now entered upon a new career. The machinery is in excellent working order, and but little legislation is needed to perfect it into a homogeneous system which will be part and parcel of the nation.

But it does not follow because the banks are transacting business upon a true standard that they will be exempt from further losses. The hazards of business are certainly much less on that account, but the rapid and unprecedented increase of the circulating medium, such as has been experienced during the last two years, may result in great injury as well as benefit to the country. The good harvests, the large products of the mines, the influx of specie from abroad, the increasing demand for produce and manufactures, the prosperous condition of trade and of the industries of the country, are sure to be followed by periods of depression which will seriously affect, not only the value of the collaterals upon which large amounts of call loans are based, but also the payment of commercial paper. The amount of legal reserve required to be held by the banks was largely reduced by the act of June 20, 1874, and the percentage held in the larger cities has been greatly diminished during the past few years. The sudden and enormous increase of individual and bank deposits in the commercial centers should be accompanied, not only by the reserve required by law, but by a much greater percentage of coin and a much smaller expansion of loans, if the banks would check unhealthy speculation, and keep themselves in condition for an adverse balance of trade and for the legitimate demands of the depositors and correspondents who confide in them.



## DISTRIBUTION OF LOANS BY THE BANK OF FRANCE, THE NATIONAL BANKS OF THE UNITED STATES, AND THE IMPERIAL BANK OF GERMANY.

*The Bank of France.*

The report of the transactions of the Bank of France for 1879, made by the general council to the general meeting of the shareholders on the 29th of January, 1880, contains much interesting information in reference to its operations.\*

The Bank of France has a capital of 182,500,000 francs, which, expressed in the currency of this country, at the rate of five francs to the dollar, is equal to \$36,500,000. It has ninety branches, as required by law, forty-one of which were carried on in 1878 at a loss of \$162,225, and thirty in 1879 at a loss \$95,840. The circulation of the bank on November 4, 1880, was \$473,805,793; its deposits \$108,892,222, of which \$40,521,965 were government deposits; its coin, \$113,850,000 of gold and \$249,400,000 of silver; and its loans \$195,707,859.†

The amount of commercial paper discounted at the Bank of France and its branches during the year 1879 reached its maximum on November 28, when it was \$172,360,000, being nearly five times the amount of its capital. The minimum amount of discounts was on March 20, being then \$74,720,000, or about twice the amount of its capital. In addition to commercial paper, or trade bills, discounted, the bank makes advances on collateral securities, such as bullion, railway shares, and government bonds. The highest amount of such advances in 1878 was \$22,960,000, which was increased in 1879 to \$31,100,000. The combined amount of commercial paper, or trade bills, and of advances on securities, ranged from \$190,000,000 to \$200,000,000. In addition to its discounts and loans the bank usually holds about \$54,500,000 in various securities of the French Government.

About one-third of the commercial paper discounted at Paris (\$209,888,385) was payable in towns where the bank had branches, the remaining two-thirds (\$468,320,475) being payable in that city. The total amount of commercial paper discounted during the entire year was more than 1,452 millions of dollars (\$1,452,175,260). The total number of pieces of paper discounted during the year was 8,071,505, of which number 4,169,292 were payable at the branches and 3,902,213 at Paris.

The reports for 1878 and 1879 give classifications of the Paris bills. The discount of certain classes of these trade bills, which are for very small amounts, is a characteristic of the Bank of France, and the statistics are both interesting and curious. The report gives a classification of the bills on Paris for 1879, as follows:

Bills of 10 francs, or \$2 each, and under.....	7,842
Bills of 11 francs to 50 francs each, or \$2.20 to \$10.....	392,845
Bills of 51 francs to 100 francs each, or \$10.20 to \$20.....	623,232
Bills of above 100 francs each, or \$20.....	2,878,294
Total .....	3,902,213

It will be observed that the whole number of these bills was nearly four millions, of which more than two-thirds (2,878,294) were for amounts above twenty dollars. The remaining 1,023,919 bills were all for sums less than twenty dollars, and, at the highest limit, could not much exceed 16 millions. There were 623,232 bills in amounts varying from \$10.20 to \$20. There were also 392,845 bills varying in amount from \$2.20 to \$10, and

\* *L'Économiste Française*, April 10, 1880. † *London Economist*, November 6, 1880.

7,842 bills as low as two dollars each, or under. The number of trade bills in 1877 below \$20 was 393,503; in 1878, 1,054,381; and in 1879, 1,023,919. The average amount of each of the Paris bills in 1879 was \$171.80; the average of the bills at the branches was \$185.60; and taking the whole number together the average was \$180.

The number, classification, and amount of commercial bills discounted during the years 1878 and 1879 are stated below in tabular form :

1878.

Where dis- counted.	Classification.					Amount.	
	10 francs, or \$2 and be- low.	11 francs to 50 francs, or \$2.20 to \$10.	51 francs to 100 francs, or \$10.20 to \$20.	Above 100 francs, or \$20.	Total number.	In francs.	In dollars. \$
Paris.....	4, 898	240, 640	808, 843	2, 428, 508	3, 482, 889	3, 106, 226, 250	621, 245, 250
Branches.....	.....	.....	.....	.....	3, 791, 950	3, 760, 636, 075	752, 127, 215
	4, 898	240, 640	808, 843	2, 428, 508	7, 274, 839	6, 866, 862, 325	1, 373, 372, 465

1879.

Paris.....	7, 842	392, 845	623, 232	2, 878, 294	3, 902, 213	3, 391, 044, 344	678, 208, 800
Branches.....	.....	.....	.....	.....	4, 160, 292	3, 869, 832, 100	773, 966, 420
	7, 842	392, 845	623, 232	2, 878, 294	8, 071, 505	7, 260, 876, 444	1, 452, 175, 220

In 1878 the average amount of each bill discounted at Paris was \$178.40, and at the branches \$198.40, the average of the whole being \$188.80.

The Bank of France receives these bills chiefly from bankers, who keep accounts with it, as it discounts only for its depositors. These bankers in turn discount them for small brokers, who receive them for this purpose from the working classes. The bills are presented to the bank for discount, with accompanying schedules. The rate of interest is the same on small bills as on large ones, and no charge is made beyond the discount or interest. The greater part of them are bills of exchange, and issue from small manufacturers, and also from workmen on their own account, known as makers of the “Articles de Paris.”

*The National Banks of the United States.*

The following table gives by geographical divisions a classification, similar to the foregoing, of the notes and bills discounted held by the national banks on October 2, 1879, when the total amount of loans was \$875,013,107:

Geographical divi- sions.	No. of banks.	Number and classification of bills.						Total bills.		Average.
		\$100 and less.	\$100 to \$500.	\$500 to \$1,000.	\$1,000 to \$5,000.	\$5,000 to \$10,000.	\$10,000 and over.	No.	Amount.	
New England States	547	30, 167	54, 965	20, 444	33, 621	10, 082	4, 590	153, 869	\$240, 552, 893 63	\$1, 563 36
Middle States.....	641	115, 285	132, 032	39, 484	50, 854	11, 453	5, 276	354, 384	416, 600, 226 30	1, 175 56
Southern States.....	175	15, 752	24, 480	7, 862	8, 936	1, 283	416	58, 729	45, 890, 807 95	781 40
Western States and Territories.....	685	90, 141	84, 563	27, 590	31, 812	5, 381	1, 800	241, 287	171, 969, 179 22	712 72
United States..	2, 048	251, 345	296, 040	95, 380	125, 223	28, 199	12, 082	808, 269	875, 013, 107 10	1, 082 58



The number of pieces of paper discounted, as will be seen, was 808,269, and the average of each discount, \$1,082.59. If the average time of these bills was sixty days, and the banks held continuously the same amount, the number of discounts made during the year would be nearly five millions (4,849,614), the total discounts more than five thousand millions (5,250,000,000), which would be equal to a discount of \$700 annually for each voter, or \$500 for each family in the country. The number of notes and bills of \$100 each, or less, at the date named was 251,345, or nearly one-third of the whole; the number of bills of less than \$500 each was 547,385, or considerably more than two-thirds of the whole; while the number of bills of less than \$1,000 each was 642,765, which is more than three-fourths of the whole number.

Every State and Territory, except Florida, Dakota and Washington, had single discounts of \$10,000 and over, and every State, except Florida, had discounts of \$5,000 and over. All the States had discounts in amounts varying from \$100, or less, to \$1,000, and over. The discounts of the banks in the State of New York amounted to 260 millions, the number of pieces of paper held being 170,137, which was more than was held by all of the New England banks combined. The discounts of the New England banks were 240 millions, which were represented by 153,869 pieces of paper. The amount of discounts in the New England States was considerably more than those of the Western and Southern States; but the number of loans in New England was only about one-half the number in the South and West. The banks in New York City held 2,907 pieces of paper of \$10,000 each, and over, and those in the remainder of the State 451. Boston held 2,258 of such pieces, and the remainder of Massachusetts 995. Philadelphia held 809, and the remainder of Pennsylvania 558; Chicago held 322, and the remainder of Illinois 105. The total number of pieces held by the four cities here named was 6,296, which is more than one-half of the aggregate of this class of bills held by all the national banks in the United States. The bank examiner in the city of New York gives the following estimate of the average amount of loans in the city of New York:

41,598 loans, averaging \$2,500 each, amounting to .....	\$104,000,000
4,926 loans, averaging 7,500 each, amounting to .....	37,000,000
2,907 loans, averaging 19,000 each, amounting to .....	55,000,000

Of the loans exceeding \$10,000 each he estimates as follows: 150 of \$50,000, amounting to \$7,500,000, and 80 of \$100,000, amounting to \$8,000,000. He says that the largest loan of any kind which ever passed through his hands was one for the sum of \$1,000,000, secured by United States bonds, and that it was a legitimate loan, understood to have been principally employed in the erection of an enormous oil-refinery in New Jersey. He also says that he has frequently handled demand loans of \$500,000 each.

In answer to an inquiry in reference to small loans, he replies that the tobacco manufacturers receive large numbers of promissory notes, of a small amount each, payable in almost every city, town, and village in the country, and running from thirty to fifty days' time. The sewing-machine companies and the manufacturers of billiard-tables, pianos, and farming implements also receive large numbers of notes of from \$10 to \$50 each, being monthly payments on articles sold by them. These small notes are usually received by the banks as collateral security for loans, and are forwarded by them for collection. A charge for collection of from 10 to 25 cents is made upon each small note.

The average amount of each loan in New York City was \$3,962; i

Boston, \$3,083; Philadelphia, \$1,688; Pittsburgh, \$1,993; Chicago, \$2,244; Baltimore, \$1,593; Milwaukee, \$2,086; Saint Louis, \$1,575; Cincinnati, \$1,231; Cleveland, \$1,244; Detroit, \$1,320; Louisville, \$1,007; and New Orleans, \$1,936.

Among the States having the smallest average loans were the following: New York, exclusive of the cities of New York and Albany, \$499; Pennsylvania, exclusive of Philadelphia and Pittsburgh, \$535; Maryland, exclusive of Baltimore, \$505; Kansas, in which the average was \$353; Iowa, with an average of \$375; West Virginia, of \$350; Delaware, \$556; New Jersey, \$566; Minnesota, \$621; Vermont, \$645; North Carolina, \$662; Tennessee, \$651; Maine, \$740; Indiana, \$711; New Hampshire, \$815; South Carolina, \$846; Georgia, \$882.

A table will be found in the appendix giving the number of each class of discounts held, their average amount, and the total amount of money loaned in each of the States and principal cities of the Union. An examination of this table will give full and interesting information relative to the distribution of loans by the banks in the different sections of the country.

### *The Imperial Bank of Germany.*

The Imperial Bank of Germany has a capital of 30 millions of dollars, and is situated in the city of Berlin.

The total number of bills of all kinds discounted during the year 1879 was 2,374,394, amounting to \$852,175,650, the average amount of each bill being \$358.90. The bills are classified as follows: There were 533,564 Berlin bills, amounting to \$263,663,280—average \$494.15 each; the number of inland bills was 1,834,351, amounting to \$578,693,335, and averaging \$315.47 each; and the number of foreign bills was 6,479, in amount \$9,819,035, and averaging \$1,515.52 each. The average amount of loans and discounts for the year was \$82,073,500. The loans and discounts were highest on December 31, when they were as follows:

Berlin bills.....	83, 157, amounting to	\$44, 636, 600, averaging	\$536 77
Inland bills.....	164, 844, amounting to	51, 840, 460, averaging	314 48
Foreign bills.....	1, 442, amounting to	3, 936, 230, averaging	2, 729 70

Total bills .....	249, 443, amounting to	100, 413, 290, averaging	402 55
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The discounts were lowest on March 23, their total amount being then \$67,349,000.

The time of the Berlin bills varied from 16 to 76 days, their average being 55 days, and the time of the inland bills was from 14 to 63 days, their average being 26 days.

### STATE BANKS, SAVINGS-BANKS, AND TRUST COMPANIES.

The first systematic effort to obtain annual statistics showing the condition of banks organized under State laws was commenced by the Treasury Department in 1834, in compliance with a resolution of the House of Representatives, passed July 10, 1832. These statistics were compiled from such returns as were required by the laws of various States to be made to their authorities. This compilation was continued for twenty-nine years, from 1834 to 1863, after which it was discontinued. The annual returns from this source were given for each State, in concise form, in the Comptroller's report for 1876, as were also such other data as could be obtained in regard to the two Banks of the United States, and other moneyed corporations of the country in operation prior to the year 1834. Those returns were incomplete and unsatisfactory.

In many of the States no reports were required from banks organized under their laws, in others reports were infrequently required, and in all there was an entire absence of uniformity as to the dates upon which reports were required to be made.

The act of Congress of February 19, 1873, section 333 of the Revised Statutes, requires the Comptroller to obtain from authentic sources, and to report to Congress, statements exhibiting under appropriate heads the resources and liabilities of such banks and savings banks as are organized under the laws of the several States and Territories. In compliance with this act he has presented annually in the appendices to his reports the resources and liabilities of these corporations, so far as it has been possible to obtain them.

Through the courtesy of State officers, returns of State banks, savings-banks, and trust and loan companies have during the past year been received from nineteen States. Twenty-seven of the States and Territories, including Illinois, Nebraska, Dakota, Oregon, Virginia, and Tennessee, do not require periodical returns of the condition of the different classes of banks organized under their laws. Statements showing the condition of the banks of each State from which returns could be obtained will, as usual, be found in the appendix. The returns received embrace 650 State banks and trust companies, and 629 savings banks.

Returns were made to the Commissioner of Internal Revenue, for purposes of taxation, showing the average capital and deposits for the six months ending May 31, 1880, by 996 State banks and trust companies, and 658 savings banks. Returns made to the Commissioner are supposed to cover all banks of this description in the United States, as well as private bankers. It can therefore be seen that, while the returns made to the different State authorities omit 346 State banks and trust companies, they are quite complete as to that class of savings-banks having no capital, the difference being only 29 banks.

#### *State banks and trust companies.*

From returns obtained by the Comptroller from State officers, the following abstract has been compiled, showing the resources and liabilities of 650 State banks and trust companies:

##### RESOURCES.

Loans and discounts .....	\$281, 496, 731
Overdrafts .....	597, 699
United States bonds .....	26, 252, 182
Other stocks, bonds, &c .....	35, 661, 792
Due from banks .....	40, 840, 345
Real estate .....	19, 489, 086
Other assets .....	7, 374, 037
Expenses .....	979, 492
Cash items .....	11, 176, 592
Specie .....	6, 905, 977
Legal tenders, bank notes, &c .....	51, 500, 226
Total .....	<u>481, 774, 159</u>

##### LIABILITIES.

Capital stock .....	\$109, 318, 451
Circulation .....	283, 308
Surplus fund .....	25, 008, 431
Undivided profits .....	10, 774, 731
Dividends unpaid .....	486, 094
Deposits .....	298, 759, 619
Due to banks .....	18, 613, 336
Other liabilities .....	18, 530, 180
Total .....	<u>481, 774, 159</u>

The foregoing table was prepared from returns from five New England States, not including Maine, which has but one State bank in operation; from four Middle States, not including Delaware; and from the Western States, with the exception of Illinois, Kansas, and Nebraska. The only Southern States represented therein are Louisiana, Texas, and Kentucky. The only Pacific State is California. There is but one State bank in New Hampshire, five in Vermont, none in Massachusetts. There are, however, five trust and loan companies in the latter State and ten in Connecticut.

In comparing the capital and deposits reported to State authorities with the same items as reported to the Commissioner of Internal Revenue, it must be remembered that, in addition to the discrepancy in the number of banks reporting, there is an important difference in the character of the reports. The reports made to State authorities give the gross deposits at certain dates, while those made to the Commissioner give the average deposits for a period of six months.

The total number of banks of all classes which report to the State authorities, and from which reports have been received, is 1,279, having a total capital of \$113,172,078, and total deposits of \$1,117,866,592; the total number of incorporated banks reporting to the Commissioner of Internal Revenue is 1,654, having a total capital of \$118,014,862, and deposits amounting to \$1,136,427,338. It thus appears that 375 banks, with capital and deposits amounting to \$4,842,784 and \$18,560,746 respectively, either do not report to any State authority, or if such reports are made it is impossible to obtain them:

Of the 4,456 banks reporting to the Commissioner of Internal Revenue, there are 2,802 private banking institutions, with a total capital of \$76,121,962, and deposits of \$182,667,237, from which no reports have been received by the Comptroller through State authorities.

*Savings banks.*

The following table exhibits the aggregate resources and liabilities of 629 savings banks of the United States, whose returns, as made to the State authorities, have been obtained by the Comptroller. The aggregate of the resources and liabilities of these savings banks, for each State separately, is given in the appendix:

RESOURCES.	
Loans on real estate .....	\$315, 273, 232
Loans on personal and collateral security .....	70, 175, 090
United States bonds .....	187, 413, 220
State, municipal, and other bonds and stocks .....	150, 440, 350
Railroad bonds and stocks .....	20, 705, 878
Bank stock .....	32, 225, 923
Real estate .....	39, 038, 502
Other assets .....	27, 053, 452
Expenses .....	216, 423
Due from banks .....	22, 063, 091
Cash .....	17, 072, 680
Total .....	881, 677, 350
LIABILITIES.	
Deposits .....	819, 106, 973
Surplus fund .....	51, 226, 472
Undivided profits .....	4, 740, 861
Other liabilities .....	6, 603, 044
Total .....	881, 677, 350

The foregoing table includes the returns from the six New England States, from four Middle States, not including Delaware, from the State of California, and from five savings banks in the other States.



The aggregate of loans in the New England States is \$295,700,696, and of deposits \$378,848,429. In the Middle States the aggregate of loans is \$114,277,627, and of deposits \$380,666,166.

The amount of average deposits returned to the Commissioner of Internal Revenue by the savings banks of the New England States, for purposes of taxation, was \$368,757,040 for the six months ending May 31, 1880, and by the savings banks of the Middle States the average deposits returned for the same period were \$389,183,856, showing but a slight difference between the returns made by these banks to the State officers and those made by them to the Commissioner.

All but three of the savings banks in the State of California are organized with capital stock, and dividends are paid to stockholders as well as to depositors. The whole amount of deposits is \$47,719,829. Of this amount, banks with capital stock amounting to \$3,853,627 hold \$32,177,037. The remaining three banks, which are without capital, hold \$15,542,792 of deposits.

Some of the largest savings banks in the city of Philadelphia, organized under old charters, are not required to make reports to any State officer. Returns received directly from four of these banks, having deposits amounting to \$23,956,285, are included in the returns for the State of Pennsylvania.

The reports to the Commissioner of Internal Revenue, which are made by all banks in the United States other than national, show that in the Southern States there are but five savings banks (including three with capital of \$342,912.16), with deposits aggregating \$1,457,924; and that in the Western States and Territories, exclusive of California, there are but 34 savings banks, with deposits amounting to \$14,019,997; making, in the two sections named, 39 savings banks, out of the total in the United States of 658.

The savings bank deposits given in the foregoing table for 1880, based on reports made to the State authorities, are \$819,106,973, and the deposits of the State banks and trust companies were \$298,759,619. These deposits do not include bank deposits. The deposits of the national banks, exclusive of those due to banks on June 11, 1880, were \$845,738,876. These deposits of the national banks bear to those of the savings banks the proportion nearly of 50.8 to 49.2, to those of the State banks and trust companies the proportion of 74 to 26, and to the combined deposits of both the proportion of 43 to 57.

The deposits of the savings banks of the six New England States alone, for the year 1880, were \$378,848,429, while the deposits of the national banks of the same States on June 11, 1880, were \$142,163,316. The former amount bears to the latter the proportion of 73 to 27.

The total population of New England is estimated to be 3,920,000, and the number of open deposit accounts in the savings banks is 1,165,653; which is equal to 30 accounts to each one hundred of the entire population. The average amount of each account is \$325; and if the total deposits were divided among the entire population the average sum of \$96.65 could be given to each individual.

The deposits of the savings banks in the State of New York were \$319,258,501 in 1880, while the population is estimated to be 5,120,000; showing that an equal distribution of the savings-bank deposits among the entire population of the State would give \$62.36 to each individual.

The loans and investments of the savings banks of the six New England States, in United States and other bonds and stocks, amounted in 1880 to \$31,109,999, which is equal to 34.61 per cent. of deposits. In 1873 the amount invested in the same manner by the savings banks of

New England was \$97,692,286, equal to 25.63 per cent. of their deposits, which were \$381,207,058 at that date. The cash on hand in 1880 was \$6,521,510, or say 1.72 per cent. of their liabilities to depositors, while in 1873 it was \$4,290,121, or 1.13 per cent. of the same liability at that date. In the State of New York, in 1880, the amount invested in United States and other stocks and bonds by the savings banks was \$212,103,705, or 66.44 per cent. of deposits, while the cash on hand was \$4,271,445, or 1.34 per cent. of deposits. In 1873 the savings banks in New York had \$153,355,664 invested in this manner, or 53.71 per cent. of deposits, and the cash on hand was \$6,714,404, or 2.35 per cent. of the deposits.

In California, in 1880, the investments of the savings-banks in United States and other stocks and bonds were \$4,228,001, or 8.8 per cent. of the deposits, against \$1,294,600, or 4.2 per cent. of the deposits, in 1877. The cash reserve on hand in California savings banks was \$2,897,471, or about 6 per cent. of the deposits, in 1880, and \$1,965,600, or about the same percentage, in 1877. While, as has been seen, the amount invested in United States and other bonds and stocks by the savings banks of the six New England States was \$131,109,999, or 34.61 per cent. of the aggregate deposits, the amount due from banks shown by the returns of the same savings banks was \$6,348,135, or 1.67 per cent. of their deposits; showing that the resources of these savings banks consist largely of deposits in national or other banks, and of investments in United States and other bonds and stocks.

In New York State the amount invested in United States bonds was \$119,985,590, and the amount in other stocks and bonds was \$92,118,115, a total of \$212,103,705, or 66 per cent. of the aggregate deposits, while the amount due from banks was \$13,893,109.

The following statement, compiled from returns made to the Commissioner of Internal Revenue, gives by States and principal cities the average capital and deposits of the State banks, trust companies, private bankers, and savings banks, in each of the New England and Middle States, for the six months ending May 31, 1880, together with the average amount of capital invested in United States bonds:

States and Territories.	No. of banks.	Capital.	Deposits.	Invested in United States bonds.		Total.
				By State banks, private bankers, and trust companies.	By savings banks.	
Maine .....	64	\$47,319	\$21,721,964	\$8,313	\$3,284,637	\$3,292,950
New Hampshire .....	71	51,000	28,301,549	5,202	919,297	924,499
Vermont .....	22	353,700	8,531,140	36,984	653,862	690,846
Massachusetts .....	161	510,000	144,268,273	223,613	13,633,993	13,857,606
Boston .....	57	5,128,099	64,553,766	2,552,661	6,499,110	9,051,771
Rhode Island .....	56	3,308,504	43,134,708	637,588	4,570,309	5,207,957
Connecticut .....	105	2,616,896	78,457,961	272,732	8,131,932	8,404,664
<b>New England States</b>	<b>536</b>	<b>12,015,518</b>	<b>388,969,361</b>	<b>3,737,093</b>	<b>37,693,200</b>	<b>41,430,293</b>
New York .....	303	8,525,645	162,275,473	2,300,198	45,993,200	48,293,488
New York City .....	506	49,335,306	291,914,072	15,153,033	73,737,079	88,890,112
Albany .....	12	641,000	13,751,649	357,521	2,552,905	2,910,426
New Jersey .....	51	1,324,553	20,391,118	269,683	5,871,992	6,141,675
Pennsylvania .....	271	8,789,931	29,071,132	752,786	70,000	822,786
Philadelphia .....	61	2,108,904	51,496,370	199,403	6,472,097	6,671,500
Pittsburgh .....	31	4,053,579	14,651,589	661,363	1,679,366	2,340,729
Delaware .....	8	675,689	2,127,426	20,000	.....	20,000
Maryland .....	12	564,434	819,944	251,189	13,538	264,727
Baltimore .....	38	3,134,842	25,814,319	309,900	9,890,353	10,200,253
Washington .....	7	357,060	3,303,875	289,758	20,535	310,293
<b>Middle States .....</b>	<b>1,300</b>	<b>79,510,943</b>	<b>615,618,967</b>	<b>20,564,834</b>	<b>146,301,155</b>	<b>166,865,989</b>



The following statement gives like information in reference to the same classes of banks in the Southern and Western States, and in the Pacific States and Territories:

States and Territories.	No. of banks.	Capital.	Deposits.	Invested in United States bonds.		
				By State banks, private bankers, and trust companies.	By savings banks.	Total.
Virginia .....	76	\$3,036,974	\$7,757,202	\$294,208	0	\$294,208
West Virginia .....	20	1,247,128	4,034,743	137,488	0	137,488
North Carolina .....	13	790,321	1,596,632	0	0	0
South Carolina .....	13	511,499	658,812	52,333	0	52,333
Georgia .....	58	4,068,279	5,910,827	18,050	1,000	19,050
Florida .....	9	83,830	287,289	0	0	0
Alabama .....	26	1,040,241	2,269,647	742	0	742
Mississippi .....	33	1,083,690	2,634,915	209,358	0	209,358
Louisiana .....	3	128,265	87,343	45,000	0	45,000
New Orleans .....	11	2,777,031	4,632,122	643,013	0	643,013
Texas .....	105	3,701,080	6,332,751	163,133	0	163,133
Arkansas .....	15	245,110	577,628	75,102	0	75,102
Kentucky .....	71	6,099,666	7,698,114	306,979	0	306,979
Louisville .....	15	5,267,028	5,803,673	471,197	0	471,197
Tennessee .....	80	1,769,228	3,222,740	125,388	0	125,388
<b>Southern States.</b>	<b>498</b>	<b>31,847,370</b>	<b>53,504,438</b>	<b>2,541,991</b>	<b>1,000</b>	<b>2,542,991</b>
Ohio .....	248	5,704,140	20,834,648	867,475	86,959	954,434
Cincinnati .....	12	1,402,241	4,392,711	275,671	0	275,671
Cleveland .....	9	1,045,924	13,965,571	678,379	2,151,270	2,829,649
Indiana .....	144	4,365,434	13,172,783	507,953	42,061	550,014
Illinois .....	316	4,092,314	17,061,788	675,606	60,000	735,606
Chicago .....	34	4,272,495	12,584,083	2,559,823	0	2,559,823
Michigan .....	155	2,346,799	7,105,952	154,894	0	154,894
Detroit .....	14	1,066,041	7,544,048	345,742	134,267	480,009
Wisconsin .....	109	1,578,843	5,964,028	184,761	0	184,761
Milwaukee .....	9	634,731	7,788,900	15,914	0	15,914
Iowa .....	309	5,153,906	13,326,191	319,876	0	319,876
Minnesota .....	95	1,906,375	5,000,150	119,968	0	119,968
Missouri .....	170	4,250,175	15,307,216	428,208	0	428,208
Saint Louis .....	28	5,705,555	18,688,699	873,395	0	873,395
Kansas .....	148	1,564,144	4,877,150	90,397	0	90,397
Nebraska .....	83	653,800	2,019,814	39,492	0	39,492
<b>Western States.</b>	<b>1,883</b>	<b>45,743,007</b>	<b>169,633,732</b>	<b>8,137,554</b>	<b>2,474,557</b>	<b>10,612,111</b>
Oregon .....	15	1,245,208	1,033,103	112,423	6,300	118,723
California .....	85	9,430,629	14,928,718	197,341	0	197,341
San Francisco .....	26	12,104,546	67,497,294	3,449,052	2,711,604	6,160,656
Colorado .....	38	584,917	3,479,877	0	0	0
Nevada .....	13	364,457	834,548	100,000	0	100,000
Utah .....	11	206,000	1,233,952	0	0	0
New Mexico .....	5	6,667	181,925	0	0	0
Wyoming .....	4	128,054	271,201	0	0	0
Idaho .....	2	5,358	18,368	0	0	0
Dakota .....	18	127,511	396,279	0	0	0
Montana .....	13	446,708	724,031	0	0	0
Washington .....	4	257,000	525,109	0	0	0
Arizona .....	5	112,932	243,673	25,000	0	25,000
<b>Pacific States and Territories.</b>	<b>239</b>	<b>25,019,987</b>	<b>91,368,078</b>	<b>3,883,816</b>	<b>2,717,904</b>	<b>6,601,720</b>

The total number of State and savings banks, trust companies and private bankers in the United States, with the average amount of their capital, deposits, and investments in United States bonds, for the six months named, were as follows:

Number of banks .....	4,456
Average capital .....	\$194,136,825
Average deposits .....	1,319,094,576
Average investments in United States bonds .....	228,053,104

The following table exhibits in a concise form, by geographical divisions, the total average capital and deposits of all State and savings banks and private bankers in the country, for the six months ending May 31, 1880:

Geographical divisions.	State banks and trust companies.			Private bankers.			Savings banks with capital.			Savings banks without capital.	
	No.	Capital.	Deposits.	No.	Capital.	Deposits.	No.	Capital.	Deposits.	No.	Deposits.
		Millions.	Millions.		Millions.	Millions.		Millions.	Millions.		Millions.
New England States.....	40	6.86	16.47	74	5.16	3.74	.....	.....	.....	422	368.76
Middle States .....	234	38.98	154.89	885	40.01	71.54	6	0.53	3.19	175	386.00
Southern States .....	241	26.09	38.51	252	4.81	13.54	3	0.34	0.57	2	0.88
Western States and Territories.....	481	41.44	108.91	1,501	26.14	93.85	20	3.17	30.85	30	27.39
United States.....	996	113.97	318.78	2,802	76.12	182.67	29	4.04	34.61	629	783.03

#### NUMBER, CAPITAL AND DEPOSITS OF NATIONAL BANKS, STATE AND SAVINGS-BANKS, AND PRIVATE BANKERS.

The capital of the 2,076 national banks in operation on June 11, 1880, as will be seen by a table in the appendix, was \$455,909,565, not including surplus, which fund at that date amounted to 118 millions of dollars; while the average capital of all the State banks, private bankers, and savings banks for the six months ending May 31, 1880, was but \$194,136,825; which amount is but little more than one-third of the combined capital and surplus of the national banks.

The net deposits of the national banks were \$900,788,714, and the average deposits of all other banks, including savings banks, were \$1,319,094,576, of which more than one-half, or \$783,033,149, consisted of the deposits of the 629 savings banks having no capital stock, which are included in the above aggregate.

The increase in the net deposits of the national banks during the year was \$187,385,075; of the savings banks, \$34,508,295; of the private bankers, \$42,749,684; and of the State banks and trust companies \$61,713,761, making a total increase in the bank deposits of the country of \$326,356,815.

The table below exhibits the aggregate average capital and deposits for the six months ending May 31, 1880, of all classes of banks other than national, and the capital and net deposits of the national banks on June 11 following:

Geographical divisions.	State banks, savings banks, private bankers, &c.			National banks.			Total.		
	No.	Capital.	Deposits.	No.	Capital.	Net deposits.	No.	Capital.	Deposits.
		Millions.	Millions.		Millions.	Millions.		Millions.	Millions.
New England States....	536	12.02	388.97	548	165.60	161.90	1,084	177.62	550.93
Middle States .....	1,300	79.51	615.62	654	170.44	480.06	1,954	249.95	1,095.68
Southern States .....	498	31.85	53.50	177	30.79	45.90	675	62.64	99.40
Western States and Territories.....	2,122	70.76	261.00	697	89.08	212.87	2,819	159.84	473.87
United States.....	4,456	194.14	1,319.00	2,076	455.91	900.79	6,532	650.05	2,219.88

From this table it will be seen that the total number of banks and bankers in the country at the dates named was 6,532, with a total banking capital of \$650,049,390, and total deposits\* of \$2,219,883,290.

In the appendix will be found similar tables for various periods, from 1875 to 1880, where will also be found other tables giving the assets and liabilities of State institutions during the past year, so far as they could be obtained from the official reports of the several State officers.

A table arranged by States and principal cities, giving the number, capital and deposits, and the tax thereon, of all banking institutions other than national, for the six months ending May 31, 1880, and for previous years, will be found in the appendix.

The following table exhibits, for corresponding dates in each of the last five years, the aggregate amounts of the capital and deposits of each of the classes of banks given in the foregoing table :

Years	National banks.			State banks, private bankers, &c.			Savings banks with capital.			Savings banks without capital.		Total.		
	No.	Capital.	Deposits.	No.	Capital.	Deposits.	No.	Capital.	Deposits.	No.	Deposits.	No.	Capital.	Deposits.
		Millions.	Millions.		Millions.	Millions.		Millions.	Millions.		Millions.		Millions.	Millions.
1876..	2,091	500.4	713.5	3,803	214.0	480.0	26	5.0	37.2	691	844.6	6,611	719.4	2,075.3
1877..	2,078	481.0	768.2	3,799	218.6	470.5	26	4.9	38.2	676	843.2	6,579	704.5	2,120.1
1878..	2,056	470.4	677.2	3,709	202.2	413.3	23	3.2	26.2	668	803.3	6,456	675.8	1,920.0
1879..	2,048	455.3	713.4	3,639	197.0	397.0	29	4.2	36.1	644	747.1	6,360	656.5	1,893.5
1880..	2,076	455.9	900.8	3,798	190.1	501.5	29	4.0	34.6	629	783.0	6,532	650.0	2,219.9

#### SECURITY OF CIRCULATING NOTES.

The following table exhibits the classes and amounts of United States bonds held by the Treasurer on the 1st day of November, 1880, to secure the redemption of the circulating notes of the national banks:

Class of bonds.	Authorizing act.	Rate of interest.	Amount.
Loan of February, 1861 (81s) .....	February 8, 1861 .....	6 per cent .....	\$2,046,000
Loan of July and August, 1861 (81s) ..	July 17 and August 5, 1861 .....	do .....	33,405,050
Loan of 1863 (81s) .....	March 3, 1863 .....	do .....	17,027,100
Consols of 1867 .....	March 3, 1865 .....	do .....	3,000
Consols of 1868 .....	do .....	do .....	5,000
Ten-forties of 1864 .....	March 3, 1864 .....	5 per cent .....	526,900
Funded loan of 1881 .....	July 14, 1870, and January 20, 1871 ..	do .....	146,552,850
Funded loan of 1891 .....	do .....	4½ per cent .....	36,988,950
Funded loan of 1907 .....	do .....	4 per cent .....	119,075,100
Pacific Railway bonds .....	July 1, 1862, and July 2, 1864 .....	6 per cent .....	4,119,000
Total .....	.....	.....	359,748,950

On October 1, 1865, the total amount of bonds held for this purpose was \$276,250,550, of which \$199,397,950 was in six per cents, and

\* The terms "gross deposits," "individual deposits," and "net deposits" of national banks, as used in this report, are explained as follows:

The gross deposits of the national banks are the amounts reported by them to the credit of stockholders for dividends unpaid; to the credit of individuals, companies, and firms; to the credit of the United States and its disbursing officers; and to the credit of other banks. The individual deposits are the amounts reported under that head, consisting of amounts to the credit of individuals, companies, and firms only. The net deposits are arrived at by deducting from the sum of the items making up the gross deposits the amount of clearing-house exchanges reported, and the amount of balances due from banks (with the exception of that due from reserve agents) not exceeding the amount due to banks.

\$76,852,600 in five per cents. On October 1, 1870, the banks held \$246,891,300 of six per cents, and \$95,942,550 of five per cents. Since that time there has been to November 1, 1880, a decrease of \$190,286,150 in six per cent bonds, and an increase of \$51,137,200 in five per cents.

The banks now hold \$36,988,950 of four and a half per cents, all of which have been deposited in the Treasury since September 1, 1876, and \$119,075,100 of four per cents, which have been deposited since July 1, 1877.

During the last year \$19,243,300 of four per cents have been withdrawn by the banks, chiefly for the purpose of realizing the large premiums thereon, and \$22,370,750 of five per cents have been deposited, which will mature in a few months. The banks still hold \$8,000 of six per cent. five-twenty bonds, and \$526,900 of five per cent. ten-forty bonds, upon which interest has ceased. They also hold \$146,552,850 of the fives of 1881, which are redeemable on the 1st of next May; \$2,046,000 of sixes of 1880, payable on the first day of January next; and \$50,432,150 of sixes of 1881, which are redeemable on the 1st of July next.

NATIONAL-BANK AND LEGAL-TENDER NOTES, BY DENOMINATIONS.  
CIRCULATING NOTES OF THE BANK OF FRANCE AND IMPERIAL  
BANK OF GERMANY, BY DENOMINATIONS.

The following table exhibits by denominations the amount of national-bank and legal-tender notes outstanding on November 1, 1880, and the aggregate amounts of both kinds of notes for the same date in 1878 and 1879:

Denominations.	1880.			1879.	1878.
	Amount of national-bank notes.	Amount of legal-tender notes.	Aggregate.	Aggregate.	Aggregate.
Ones .....	\$2, 202, 462	\$21, 954, 900	\$24, 247, 362	\$22, 887, 502	\$24, 652, 750
Twos .....	1, 207, 260	21, 829, 318	23, 036, 578	21, 030, 868	22, 915, 066
Fives .....	99, 910, 760	67, 132, 138	167, 042, 898	159, 522, 853	148, 116, 015
Tens .....	113, 820, 580	75, 835, 008	189, 655, 588	181, 447, 558	168, 908, 071
Twenties .....	75, 631, 560	72, 088, 277	147, 719, 837	141, 445, 933	131, 785, 709
Fifties .....	21, 418, 300	24, 359, 175	45, 777, 475	46, 177, 945	47, 658, 906
One hundreds .....	26, 888, 900	33, 069, 700	59, 958, 600	58, 339, 780	58, 331, 470
Five hundreds .....	639, 500	16, 126, 000	16, 765, 500	23, 088, 000	31, 150, 000
One thousands .....	239, 000	14, 401, 500	14, 640, 500	23, 111, 500	33, 794, 500
Five thousands .....	.....	565, 000	565, 000	3, 250, 000	.....
Ten thousands .....	.....	320, 000	320, 000	2, 500, 000	.....
Add for fractions of notes not presented or destroyed .....	15, 129	.....	15, 129	13, 586	11, 581
Totals .....	342, 063, 451	347, 681, 016	689, 744, 467	682, 815, 520	667, 333, 137
Deduct for legal-tender notes destroyed in Chicago fire .....	.....	1, 000, 000	1, 000, 000	1, 000, 000	1, 000, 000
Totals .....	342, 063, 451	346, 681, 016	688, 744, 467	681, 815, 520	666, 333, 137

The law provides that, after specie payments are resumed, national banks shall not be furnished with notes of a less denomination than five dollars; and in accordance with this provision no notes of the denominations of one and two dollars have been issued since the first day of January, 1879. The amount of ones outstanding on that day was \$4,793,817, and of twos, \$2,924,930; total, \$7,718,747. Since that date the ones have been reduced \$2,501,355, and the twos, \$1,717,670, making a total reduction of small bank notes of \$4,219,025.

The amount of legal-tender notes of the denomination of one dollar outstanding on that date was \$20,257,109, and of twos, \$20,035,525;

total, \$40,292,634. The increase since that date to November 1, 1880, has been \$3,491,584. Thus it will be seen that while the small notes of the national banks have been reduced more than four millions (\$4,219,025), in compliance with law, since the date of resumption, the legal-tender notes of the same denominations have been increased \$3,491,584. The total amount, in these denominations, of both kinds of notes outstanding on November 1, 1880, was \$47,283,940. The total increase during the year has been \$3,365,575; the decrease during the year previous was \$3,649,451. Of the entire amount of national-bank and legal-tender notes now outstanding, nearly seven per cent. consists of one and two dollar notes, and more than thirty-one per cent. of ones, twos, and fives, while more than fifty-eight per cent. is in the notes of a less denomination than twenty dollars, and about eighty per cent. is in notes of a lower denomination than fifty dollars. Of the entire issue, about twenty per cent. in amount is in denominations of fifty dollars and upwards.

The circulation of the Imperial Bank of Germany, on January 1, 1879, was \$165,933,942; its circulation on January 1, 1880, was \$198,201,144; showing an increase of \$32,267,202 during the year.

The following table exhibits by denominations the circulation of the Imperial Bank of Germany, on January 1, 1880, in thalers and marks, which are here converted into our currency:

Thalers.				Marks.			
Number of pieces.	Denominations.	Value of each piece in dollars.	Amount in dollars. (Thaler = 75 cents.)	Number of pieces.	Denominations.	Value of each piece in dollars.	Amount in dollars. (Mark = 25 cents.)
185	500 thalers.	375. 00	69,375	255,753	1,000 marks.	250	63,938,250
2,357	100 thalers.	75. 00	176,775	213,384	500 marks.	125	26,673,000
1,716½	50 thalers.	37. 50	64,369	4,281,731½	100 marks.	25	107,043,287
8,834	25 thalers.	18. 75	167,512	.....	.....	.....	.....
8,164½	10 thalers.	7. 50	68,576	.....	.....	.....	.....
2,226	.....	.....	546,607	4,750,868½	.....	.....	197,654,537

The following table\* gives the circulation of the Bank of France and its branches, with the number of pieces, and the denominations in francs and in dollars, on January 29, 1880:

Number of pieces.	Denominations.	Value of each piece in dollars.	Amount in francs.	Amount in dollars. (Fr. = 20 cents.)
5	5,000 francs.	1,000	25,000	5,000
1,371,477	1,000 francs.	200	1,371,477,000	274,295,400
716,980	500 francs.	100	358,490,000	71,698,000
2,009	200 francs.	40	601,800	120,360
5,716,919	100 francs.	20	571,691,900	114,338,380
297,516	50 francs.	10	10,375,800	2,075,160
27,327	25 francs.	5	683,075	136,615
335,635	20 francs.	4	6,712,700	1,342,540
197,448	5 francs.	1	987,240	197,448
1,241*	Forms out of date.	.....	429,850	85,970
8,577,553	.....	.....	2,321,474,365	464,294,873

The amount of circulation of the Bank of France on January 30, 1879, was 2,290,970,830 francs, or say \$458,194,166, showing an increase between that time and January 29, 1880, the date of the foregoing table, of 30,503,535 francs, or \$6,100,707.

\*London Bankers' Magazine for August, 1880, pp. 656 and 662.



It will be seen that the Imperial Bank of Germany issues no notes of a less denomination than \$7.50, and that the Bank of France issues less than two millions of dollars in notes of a less denomination than five dollars. The Bank of England issues no notes of less than twenty-five dollars, and the Banks of Ireland and Scotland none less than five dollars.

The amount of circulation in this country in denominations of five dollars and under on November 1, 1880, was \$214,326,838. In the foreign countries named a large amount of silver and gold coin of the lower denominations enters into general circulation. It will be impossible to keep in circulation any large amount of small gold coins or silver dollars, unless the coinage of the latter is restricted and the small notes withdrawn.

Section 5182 of the Revised Statutes requires that the circulating notes of the national banks shall be signed by the president or vice-president and by the cashier of the association issuing the same. The written signature of at least one bank officer is necessary as a check between this office and the issuing banks, for if an illegal issue should occur the signature of such officer would be a means of determining the genuineness of the note. The written signatures of the officers of the banks are also necessary as an additional precaution against counterfeiting. A number of the banks, however, issue their notes with printed signatures, and in some cases with badly executed lithographed ones. A bill is now pending in one of the bank committees of Congress, imposing a fine of twenty dollars for every circulating note issued by any national bank without the written signature thereon of at least one of its officers; and the Comptroller respectfully repeats his previous recommendation for the passage of such an act, which act should also impose a fine upon any engraver or lithographer who shall print the signatures of bank officers upon such circulating notes.

UNITED STATES BONDS OUTSTANDING, AND THE AMOUNT HELD BY THE NATIONAL BANKS, STATE BANKS, AND PRIVATE BANKERS.

The following table exhibits the classification of the unmatured, interest-bearing, bonded debt of the United States on August 31, 1865, when the public debt reached its maximum, and on the 1st day of July in each year thereafter, together with the amount outstanding on November 1 of the present year:\*

Date.	6 per cent. bonds.	5 per cent. bonds.	4½ per cent. bonds.	4 per cent. bonds.	Total.
August 31, 1865.....	\$908, 518, 091	\$199, 792, 100	.....	.....	\$1, 108, 310, 191
July 1, 1866.....	1, 008, 388, 469	198, 528, 435	.....	.....	1, 206, 916, 904
July 1, 1867.....	1, 421, 110, 719	198, 533, 435	.....	.....	1, 619, 644, 154
July 1, 1868.....	1, 841, 521, 800	221, 588, 400	.....	.....	2, 063, 110, 200
July 1, 1869.....	1, 886, 341, 300	221, 589, 300	.....	.....	2, 107, 930, 600
July 1, 1870.....	1, 764, 932, 300	221, 589, 300	.....	.....	1, 986, 521, 600
July 1, 1871.....	1, 613, 807, 300	274, 236, 450	.....	.....	1, 888, 133, 750
July 1, 1872.....	1, 374, 883, 800	414, 567, 300	.....	.....	1, 789, 451, 100
July 1, 1873.....	1, 281, 238, 650	414, 567, 300	.....	.....	1, 695, 805, 950
July 1, 1874.....	1, 213, 624, 700	510, 628, 050	.....	.....	1, 724, 252, 750
July 1, 1875.....	1, 100, 865, 550	607, 132, 750	.....	.....	1, 707, 998, 300
July 1, 1876.....	984, 990, 650	711, 685, 800	.....	.....	1, 696, 685, 450
July 1, 1877.....	854, 621, 850	703, 266, 650	\$140, 000, 000	.....	1, 696, 888, 500
July 1, 1878.....	738, 619, 000	703, 266, 650	240, 000, 000	\$98, 850, 000	1, 780, 735, 650
July 1, 1879.....	310, 932, 500	646, 905, 500	250, 000, 000	679, 878, 110	1, 887, 716, 110
July 1, 1880.....	235, 780, 400	484, 864, 900	250, 000, 000	739, 347, 800	1, 709, 993, 100
November 1, 1880.....	217, 699, 550	469, 651, 050	250, 000, 000	739, 347, 800	1, 676, 698, 400

\* The Navy pension fund, amounting to \$14,000,000 in 3 per cents., the interest upon which is applied to the payment of naval pensions exclusively, is not included in the table.



Since the year 1865, the national banks have held an average of more than one-fifth, and now nearly one-fourth, of the interest-bearing debt of the United States. Previous to the year 1872 much the larger portion of these bonds bore interest at the rate of 6 per cent., and until the year 1877 all of the bonds bore interest at either five or six per cent. These classes of bonds have since been greatly reduced, and are now less than three-fifths of the amount pledged for circulation, while more than two-fifths of the amount consists of bonds bearing interest at 4 and 4½ per cent. only. This will be seen from the following table, which exhibits the amounts and classes of United States bonds owned by the banks, including those pledged as security for circulation and for public deposits, on the first day of July in each year since 1865, and upon November 1 of the present year:

Date.	United States bonds held as security for circulation.					U. S. bonds held for other purposes at nearest date.	Grand total.
	6 per cent. bonds.	5 per cent. bonds.	4½ per cent. bonds.	4 per cent. bonds.	Total.		
July 1, 1865.....	\$170,383,500	96 76,000	.....	.....	\$23 50,100	\$155,785,750	\$391,744,850
July 1, 1866.....	241,063,500	8 26,850	.....	.....	32 10,350	121,152,950	448,463,300
July 1, 1867.....	251,430,400	8 77,300	.....	.....	34 97,500	84,002,650	424,810,150
July 1, 1868.....	250,726,950	9 88,950	.....	.....	34 35,900	80,922,500	422,418,400
July 1, 1869.....	255,190,350	8 31,250	.....	.....	34 51,600	65,102,000	397,953,000
July 1, 1870.....	247,853,850	6 23,200	.....	.....	34 78,550	43,980,600	386,258,150
July 1, 1871.....	220,497,750	12 87,800	.....	.....	35 85,550	39,450,800	390,836,350
July 1, 1872.....	173,251,450	20 89,250	.....	.....	38 40,700	31,868,200	412,309,900
July 1, 1873.....	160,923,500	22 87,050	.....	.....	38 10,550	25,724,400	416,134,950
July 1, 1874.....	154,370,700	23 90,500	.....	.....	39 71,200	25,347,100	416,518,300
July 1, 1875.....	136,965,100	23 50,400	.....	.....	37 14,500	26,900,200	403,214,700
July 1, 1876.....	109,313,450	23 31,800	.....	.....	34 94,750	45,170,800	386,565,050
July 1, 1877.....	87,690,300	20 51,050	\$44,372,250	.....	33 13,600	47,315,050	386,028,650
July 1, 1878.....	82,421,200	19 14,650	48,448,650	\$19,182,000	34 46,400	68,850,900	418,897,300
July 1, 1879.....	58,042,800	14 16,800	85,058,550	118,538,850	35 54,600	76,603,520	430,858,120
July 1, 1880.....	58,056,150	13 58,650	37,760,950	120,076,300	36 52,050	42,831,300	404,483,350
Nov. 1, 1880.....	58,605,150	14 79,750	36,988,950	119,075,100	35 48,950	43,620,400	408,369,350

All of the five and six per cent. bonds now held by the national banks, with the exception of Pacific Railway bonds, will mature on or before July 1, 1881, and will probably be replaced by bonds bearing interest at 4 or 4½ per cent., or by new bonds hereafter to be issued by authority of Congress bearing a less rate of interest.

The amount of United States bonds held by State and savings-banks cannot be accurately ascertained, for the reason that banks in seventeen of the States do not make reports of their condition to State authorities. From such reports as have been received through the courtesy of State officers, it is found that the State banks and trust companies and the savings banks held the following amount of United States bonds, at different dates during the year 1880:

State banks in twenty States .....	\$7,142,532
Trust companies in five States.....	19,109,650
Savings banks in fourteen States.....	187,413,220
<b>Total.....</b>	<b>213,665,402</b>

The Commissioner of Internal Revenue receives semi-annual reports from all banks organized under State laws, and also reports from private bankers, giving their average capital and deposits, and the amount of such capital invested in United States bonds; and from these returns the following table has been compiled, showing, by geographical divi-

sions, the average amount of capital invested in United States bonds for the six months ending May 31, in the years 1878, 1879, and 1880:

Six months ending—	By State banks, private bank- ers, and trust companies.	By savings banks.	Total.
May 31, 1878:			
New England States .....	\$3, 028, 738	\$26, 597, 718	\$29, 626, 456
Middle States .....	23, 915, 757	102, 163, 985	126, 079, 742
Southern States .....	1, 523, 882	66, 667	1, 590, 549
Western States .....	6, 062, 265	1, 172, 598	7, 234, 863
Pacific States and Territories .....	3, 356, 369	1, 082, 620	4, 438, 989
United States .....	37, 887, 011	131, 083, 588	168, 970, 599
May 31, 1879:			
New England States .....	3, 669, 967	34, 941, 378	38, 611, 345
Middle States .....	25, 686, 469	123, 818, 148	149, 504, 617
Southern States .....	3, 593, 179	86, 021	3, 679, 200
Western States .....	8, 326, 402	2, 164, 668	10, 491, 070
Pacific States and Territories .....	5, 015, 948	1, 372, 845	6, 388, 793
United States .....	46, 291, 965	162, 383, 060	208, 675, 025
May 31, 1880:			
New England States .....	3, 737, 093	37, 699, 200	41, 436, 293
Middle States .....	20, 564, 834	146, 301, 155	166, 865, 989
Southern States .....	2, 541, 991	1, 000	2, 542, 991
Western States .....	8, 137, 554	2, 474, 557	10, 612, 111
Pacific States and Territories .....	3, 883, 816	2, 717, 904	6, 601, 720
United States .....	38, 865, 288	189, 187, 816	228, 053, 104

The above table gives the average amount of capital invested in United States bonds, from which should be deducted the amount of premium paid at the time of purchase, which cannot be ascertained.

The amount of United States bonds held by the national banks on November 1, 1880, as above shown, was \$403,369,350, and the average amount held by the other banks and bankers of the country, during the six months ending May 31 last, was \$228,053,104. The total amount held by all the banks and bankers is thus shown to be considerably more than one-third of the whole interest-bearing, funded debt of the United States, as follows :

Savings banks .....	\$189, 187, 816
State banks and trust companies .....	24, 498, 604
Private bankers .....	14, 306, 684
National banks .....	403, 369, 350
Total .....	631, 422, 454

If the amount of bonds held by national banks and private bankers be deducted from the last total, the remainder will agree very nearly with the amount of bonds held by State and savings' banks as returned by State officers, and shown on the preceding page. These amounts, therefore, seem to be very nearly correct, and to comprise the whole amount of United States bonds held by all the banks and bankers of the country.

A table will be found in the appendix giving the number of each class of banks and of private bankers in each State, together with the amount of their capital, deposits, and United States bonds held.

CLEARING-HOUSE CERTIFICATES.

Section 5192 Revised Statutes provides that clearing-house certificates, representing specie or lawful money specially deposited for the purpose of any Clearing House association, shall also be deemed to be lawful money in the possession of any association belonging to such

Clearing House holding and owning such certificate; and section 5193 provides that the Secretary of the Treasury may receive United States notes on deposit, without interest, from any national banking associations, in sums not less than ten thousand dollars, and issue certificates therefor in denominations of not less than five thousand dollars, which certificates may be counted as part of the lawful money reserve, and may be accepted in the settlement of clearing-house balances at the places where the deposits therefor were made.

The legal-tender note certificates were first issued in the fiscal year 1873. On June 30, 1875, there were outstanding \$59,045,000 of these certificates, of which the national banks held \$47,310,000. On June 30, 1876, the amount outstanding was \$33,140,000, of which the banks held \$27,955,000. On June 30, 1879, the amount had been reduced to \$29,330,000, and the banks held on June 14 of the same year \$25,180,000. The amount outstanding on October 1 was \$9,885,000, and the national banks held on that day \$7,655,000, they having surrendered a large portion of these certificates for the purpose of supplying the demand for United States notes.

The issue of the gold certificates was authorized by the fifth section of the act March 3, 1863, and they were used for clearing-house purposes soon after the passage of the national-bank act. The first issue was made on November 13, 1865. On June 30, 1875, there were outstanding \$21,796,300, of which the national banks in New York City held \$12,642,180. The issue of these certificates was discontinued on December 1, 1878, and the amount outstanding had decreased on June 30, 1879, to \$15,413,700, and on October 1, 1880, to \$7,480,100. The issue of gold certificates having been discontinued by the government, and the amount of gold coin having rapidly increased, the banks in New York found it necessary to establish a depository of gold coin for the convenience of the Clearing House. This depository at the present time is the Bank of America, by which bank certificates of deposit were first issued on October 14, 1879. The amount of such certificates outstanding on November 1, 1879, was \$9,155,000, on January 1, 1880, \$25,610,000, and on June 1, and since that time, \$39,550,000, which is the full capacity of the vault. Of this amount the national banks of New York City held on June 11, 1880, \$33,337,000; on October 1, \$36,189,000.

The Clearing Houses of Boston, Philadelphia, and Baltimore have organized similar depositories in order to utilize their gold coin and save the risk and inconvenience of handling and transporting the coin itself. The total amount of such certificates issued to the national banks in New York up to October 1 was \$36,189,000, in Philadelphia, \$6,040,000, in Boston, \$5,908,000, and in Baltimore, \$30,000; total, \$48,167,000.

#### TRANSACTIONS OF THE NEW YORK CLEARING HOUSE.

The New York Clearing House Association is composed of forty-five national and twelve State banks, and the assistant treasurer of the United States at New York. The exchanges at the Clearing House for the year ending October 1, 1880, obtained through the courtesy of Mr. W. A. Camp, its manager, were more than thirty-seven thousand millions, and the balances paid in money were more than fifteen hundred millions. The average daily exchanges were more than one hundred and twenty-one millions, and the average daily balances paid in money were but about four and nine-tenths millions, or only four and one-tenth per cent. of the amount of the settlements.

The New York Clearing House was organized in 1853, and the following table exhibits its transactions yearly, and the amount and ratio of

currency required for the payment of daily balances, for the last twenty-seven years:

Years.	No. of banks.	*Capital.	Exchanges.	Balances paid in money.	Average daily exchanges.	Average daily balances paid in money.	Ratio.
1854 .....	50	14,908	\$5,750,455,987	\$297,411,494	\$19,104,505	\$988,078	Pr. ct. 5.2
1855 .....	48	14,180	5,382,912,088	289,694,137	17,412,062	940,585	5.4
1856 .....	50	13,706	6,904,113,328	334,714,489	22,278,108	1,079,724	4.8
1857 .....	50	20,300	8,333,36,718	365,313,902	26,968,371	1,182,246	4.4
1858 .....	46	16,019	4,753,34,386	314,238,911	18,383,736	1,016,954	6.6
1859 .....	47	21,714	6,443,35,956	303,984,083	20,867,333	1,177,944	5.6
1860 .....	50	17,436	7,223,33,057	380,693,438	23,401,757	1,232,018	5.3
1861 .....	50	10,605	5,911,12,758	353,383,944	19,269,520	1,151,088	6.0
1862 .....	50	15,820	6,871,13,561	415,530,331	22,237,682	1,344,758	6.0
1863 .....	50	12,508	14,887,37,849	677,626,483	48,428,658	2,307,253	1.1
1864 .....	49	30,783	24,093,36,858	885,719,205	77,984,455	2,866,405	3.7
1865 .....	55	33,013	26,083,34,842	1,035,765,168	84,796,040	3,372,838	4.6
1866 .....	58	10,200	26,711,16,914	1,066,135,196	98,541,195	3,472,753	3.7
1867 .....	58	16,200	28,673,30,472	1,144,963,451	93,101,107	3,717,414	3.9
1868 .....	59	10,300	28,463,36,637	1,125,455,237	92,182,104	3,642,250	4.8
1869 .....	59	20,200	37,403,38,987	1,120,318,308	121,451,393	3,637,397	3.0
1870 .....	61	20,200	27,803,39,406	1,036,484,822	90,274,479	3,365,210	1.1
1871 .....	62	20,200	29,303,36,683	1,209,721,029	95,133,074	3,927,696	4.1
1872 .....	61	20,200	32,683,37,404	1,213,293,827	105,964,277	3,930,266	3.7
1873 .....	60	10,200	33,973,38,943	1,152,372,106	111,022,137	3,765,923	3.4
1874 .....	59	35,200	20,663,31,963	971,231,281	68,139,494	3,173,956	4.7
1875 .....	59	35,200	23,043,38,858	1,104,346,845	76,301,558	3,008,977	4.8
1876 .....	59	31,200	19,873,15,361	1,009,532,037	64,738,812	3,288,361	5.1
1877 .....	58	35,200	20,673,35,987	1,015,256,483	68,447,724	3,328,710	4.9
1878 .....	57	11,500	18,923,33,947	951,970,454	65,108,974	3,111,015	4.8
1879 .....	59	30,200	24,563,36,689	1,321,119,296	79,977,639	4,303,330	5.4
1880 .....	57	15,200	37,183,38,621	1,516,538,631	121,510,224	4,956,009	4.1
.....		171,783,043	535,874,297,547	22,672,815,042	164,593,878	12,733,300	4.2

\* The capital is for various dates, the amount at a uniform date in each year not being obtainable.

† Yearly averages for twenty-seven years.

‡ Totals for twenty-seven years.

The Clearing House transactions of the assistant treasurer of the United States at New York, for the year ending November 1, 1880, were as follows:

Exchanges received from Clearing House .....	\$343,622,365
Exchanges delivered to Clearing House .....	78,193,396
Balances paid to Clearing House .....	266,387,853
Balances received from Clearing House .....	958,819
Showing that the amount paid by the assistant treasurer to the Clearing House was in excess of the amount received by him .....	265,429,034

The amount of clearings during the last year exceeded any previous year's transactions since the organization of the Clearing House. The average amount per day for the year was \$126,466,232.85. The maximum was on November 3, when it reached \$202,558,252.11. The largest amount of balances in any one day was on November 11, when it was \$11,208,025.20, and \$8,300,000 of this amount, weighing about 15½ tons, was paid in gold coin.

The total amount of transactions in the twenty-seven years since the organization of the Clearing House is \$574,849,719,103, and the average for each year is \$21,290,734,040. The amount of gold coin actually paid in settlement of balances in the last year is \$340,538,000; of Clearing House gold certificates \$1,056,462,000; of United States Clearing House certificates \$34,260,000; and of legal-tenders \$85,218,000. Of the legal-tenders, \$46,852,000 were received in October, 1879, and only \$38,366,000 during the remaining eleven months.

A table compiled, for purposes of comparison, from returns made to the New York Clearing House, will be found in the appendix, giving the clearings and balances weekly, for the months of September, October and November of various years, from 1872 to 1880.





October 2, 1879, was \$4,986,493, and on October 1, 1880, \$6,495,477, including \$1,165,120 in silver treasury certificates. The aggregate amount of specie held by the State banks in New England, New York, New Jersey, Pennsylvania, Maryland, Louisiana, Kentucky, Ohio, Iowa, Wisconsin, and Minnesota, as shown by their official reports for 1880, was \$6,201,617, of which the banks in New York City held \$4,968,722. In the returns from California the amount of coin is not given separately, but it is estimated to be three-fourths of the amount returned as currency, which was \$13,785,015.

The Director of the Mint, in his report for 1879, estimated the amount of coin in the country on June 30, 1879, at \$398,541,683, of which \$286,490,698 was gold and \$112,050,985 was silver.

His estimate for the fiscal year ending June 30, 1880, is as follows :

Amount of coin in the country June 30, 1879 .....	\$398,541,683
Net gold coinage for the year.....	56,948,497
Net silver coinage for the year .....	27,903,139
Net importation of gold for the year.....	16,519,586
Net importation of silver for the year.....	2,642,896
<hr/>	
Total coin circulation June 30, 1880 .....	501,655,711

Of this amount it is estimated that \$358,958,691 consists of gold coin, and \$142,597,020 of silver coin. The Director estimates that from the close of the last fiscal year to November 1 there has been added to the coin \$6,494,528 of gold and \$9,630,940 of silver, making the stock of coin in the country at the latter date \$517,681,179, and consisting of \$305,453,219 of gold coin and \$152,227,960 of silver. The amount of bullion in the mints and New York assay office on November 1 is stated to have been \$78,558,811 of gold and \$6,043,367 of silver, making in all \$84,602,178; which, added to the estimated amount of coin stated above, gives \$602,283,357 as the total estimate of coin and bullion in the country on November 1, of which amount \$444,012,030 was gold and \$158,271,327 was silver.

The amount of gold and silver, and the percentage of each, in the Treasury of the United States, on September 30 in each year from 1876 to 1880, and on November 1, 1880, is shown in the following table :

Period.	Silver.			Gold coin and bullion.	Total coin and bullion.	Per cent. of—	
	Standard dollars.	Other coin and bullion.	Total silver.			Silver.	Gold.
September 30, 1876.....		\$0,029,367	\$0,029,367	\$55,423,059	\$61,452,426	9.8	90.2
September 30, 1877.....		7,425,454	7,425,454	107,039,529	114,464,983	6.5	93.5
September 30, 1878....	\$12,155,205	15,777,937	27,933,142	136,036,302	163,969,444	17.0	83.0
September 30, 1879.....	31,896,774	21,173,023	52,979,797	169,827,571	222,807,368	23.8	76.2
September 30, 1880.....	47,784,744	30,878,286	78,663,030	135,641,450	214,304,480	36.7	63.3
November 1, 1880.....	47,156,588	30,820,561	77,977,149	141,127,049	219,104,198	35.6	64.4

The following table shows the amount of bullion held by the Bank of England in each year from 1870 to 1880, the pound sterling being estimated at five dollars:

1870.....	\$103,900,000	1876 .....	\$143,500,000
1871.....	117,950,000	1877 .....	126,850,000
1872.....	112,900,000	1878 .....	119,200,000
1873.....	113,500,000	1879* .....	150,942,980
1874.....	111,450,000	1880† .....	141,637,000
1875.....	119,600,000		

\* London Economist, November 8, 1879.  
† London Bankers' Magazine, October 1880.



The amount of gold and silver, and percentage of each, held by the Bank of France on December 31 of each year from 1870 to 1879, and on October 21, 1880, is shown in the following table, five francs being taken for one dollar: \*

Years.	Silver coin and bullion.	Gold coin and bullion.	Total.	Per cent. of—	
				Silver.	Gold.
December 31, 1870 .....	\$13,700,000	\$85,740,000	\$99,440,000	13.8	86.2
December 31, 1871 .....	16,240,000	110,680,000	126,920,000	12.8	87.2
December 31, 1872 .....	26,520,000	131,740,000	158,260,000	16.8	83.2
December 31, 1873 .....	31,260,000	122,260,000	153,520,000	20.4	79.6
December 31, 1874 .....	62,040,000	204,220,000	266,260,000	23.5	76.5
December 31, 1875 .....	101,000,000	234,860,000	335,860,000	30.1	69.9
December 31, 1876 .....	127,720,000	306,080,000	433,800,000	29.4	70.6
December 31, 1877 .....	173,080,000	235,420,000	408,500,000	42.4	57.6
December 31, 1878 .....	211,620,000	196,720,000	408,340,000	51.8	48.2
December 31, 1879 .....	245,520,000	148,320,000	393,840,000	62.3	37.7
October 21, 1880 .....	249,789,000	116,140,000	365,929,000	68.3	31.7

#### STATE TAXATION OF NATIONAL BANKS.

Section 5219 of the Revised Statutes of the United States provides that nothing in the national-bank act shall prevent all the shares in any national association from being included in the valuation of the personal property of the owner or holder of such shares in assessing taxes imposed by the authority of the State in which the association is located, but that the legislature of each State may determine and direct the manner and place of taxing all the shares of national banking associations located within the State, subject only to two restrictions: first, that the taxation shall not be at a greater rate than is assessed upon other moneyed capital in the hands of the individual citizens of such State; and, second, that the shares of any national banking association owned by non-residents of any State shall be taxed in the city or town where the bank is located, and not elsewhere. The same section provides that nothing herein contained shall be held or construed to exempt the real property of associations from either State, county, or municipal taxes, to the same extent, according to its value, as other real property is taxed.

In the decision of the United States Supreme Court, in the case of *Williams vs. The Board of Assessors of the City of Albany*, at the October term in 1879, Mr. Justice Miller, who delivered the opinion, commenting on this provision in reference to State taxation of national-bank shares, said:

That the provision was necessary, to authorize the States to impose any tax whatever on national-bank shares, is abundantly established by former decisions of the United States Supreme Court. As Congress was conferring a power on the States which they would not otherwise have had—to tax these shares—it undertook to impose a restriction on the exercise of that power, manifestly designed to prevent taxation which should discriminate against this class of property as compared with other moneyed capital. In permitting the States to tax these shares it was foreseen—the cases we have cited from our former decisions of the United States Supreme Court showed too clearly—that the State authorities might be disposed to tax the capital invested in these banks oppressively. This might have been prevented by fixing a precise limit in amount; but Congress, with due regard to the dignity of the States, and with a desire to interfere only so far as was necessary to protect the banks from anything beyond their equal share of the public burdens, said you may tax the real estate

\*The Bulletin de Statistique, as quoted in the Bankers' Magazine, New York, vol. XIII, page 740; except the items for 1879 and 1880, which were obtained from the London Bankers' Magazine for August, 1880, page 661, and New York Bankers' Magazine for November, 1880, page 335.

of the bank as other real estate is taxed, and you may tax the shares of the bank as the personal property of the owner to the same extent you tax other moneyed capital invested in your State. It was conceived that by this qualification of the power of taxation equality would be secured and injustice prevented.

Prior to this decision of the Supreme Court, the intent of Congress in providing for the taxation of national-bank shares by the States, had been overlooked or evaded, in collecting taxes on such shares under the laws of many of the States. As a consequence, capital invested in national banks has, in the assessment and collection of taxes, been subjected to unjust and severe discrimination in different ways in these States.

In New York the law permits the deduction of the just debts of an individual from his personal property, including his moneyed capital, excepting only from his bank shares. In Ohio the law provides certain State boards for equalizing the taxation on real estate, on railroad capital, and on capital invested in bank shares; but there is no State board for equalizing the taxation on personal property other than bank shares, railroad stock or other moneyed capital. The equalizing process as to all other personal property ceases with the county boards. But the county boards throughout the State fixed the valuation of moneyed capital for purposes of taxation at six-tenths of its true value, while the State board fixed the value of bank shares at their actual cash value. Thus while the rates of taxation were the same, yet, the valuation being different, bank shares were discriminated against to the extent of four-tenths of their value.

The States have a right to impose whatever tax they choose upon the shares of banks organized under their own laws, but they have no right to impose a greater valuation on national bank shares than on other moneyed capital in the hands of individuals, since thereby the tax becomes heavier on the bank shares than on the moneyed capital, while the law, rightly construed, says it shall be the same.

The decisions of the United States Supreme Court delivered March 2, 1880, in cases arising under the laws of the two States mentioned, protect national banks from these forms of discrimination, and indirectly protect the State banks, as these States will doubtless so modify their laws as to place State banks within their borders on at least as good a footing in respect to taxation as the national banks. By these decisions also the Supreme Court pointed out the appropriate mode of relief for national banks, when taxes are assessed upon them at a greater rate than upon other moneyed capital in the same State. This mode is to pay such portion of the unjustly imposed tax as is equal to the tax paid on other moneyed capital, and to enjoin the collection of the excess.

But these decisions do not point out any satisfactory method for the recovery of taxes which have been heretofore illegally assessed on national-bank shares and collected by the State authorities. On this point it was decided that the question of the recovery from the assessors of taxes overpaid, through errors in assessments arising from misconstructions of the law of the United States relative to the taxation of national-bank shares by the States, is not one to be decided by the Federal courts, but must be governed by the common law or the statute law of the State.

As it is in the power of the States, under the present law of Congress, so to legislate that, through mistaken construction of said law by the assessors, bank shares may be discriminated against as compared with other moneyed capital, and as redress for such mistakes depends on the action of the State courts; and as, further, to secure a true construction of the federal law by the assessors in each State may require protracted litiga-

tion, before the question of the legality of the form of taxation in each particular State can be finally decided; it becomes a question whether Congress may not better settle the whole matter by fixing more precisely the amount of taxation which may be imposed by the States on national-bank shares.

The decision of the Supreme Court, heretofore quoted, states that this oppressive taxation "might have been prevented by fixing a precise limit in amount," and it is respectfully suggested to Congress whether it would not be advisable, in order to avoid the expense and annoyance of long-continued litigation, to pass a law fixing the maximum amount of taxation which may be imposed upon national banks by State authorities. It is true that if this should be done the States so disposed might discriminate in favor of banks of their own creation, or in favor of other moneyed capital, by making the weight of taxation on such property less oppressive than that fixed on national-bank shares by Congress; but such action would be so manifestly unjust that it is more likely that legislation would follow in the more important States, the object of which would be to impose just and equitable assessments upon every class of moneyed corporations. It is also true that if the maximum rate of taxation were fixed by law, the courts and the board of assessors could yet, by construction, discriminate in favor of other moneyed corporations by requiring the tax to be at a uniform rate, while the valuation of the assessors is unequal.

The Supreme Court, in the decision already referred to upon this point, quotes from the law as follows:

Taxation shall not be at a greater rate than is assessed upon other moneyed capital in the hands of individuals.

The Court then proceeds to say:

Seizing upon the word *rate* in this sentence as if disconnected from the word *assessment*, and construing it to mean percentage on *any* valuation that might be made, the Court of Appeals arrives at the conclusion that since that percentage is the same in all cases the act of Congress is not infringed. If this philological criticism were perfectly just, we still think the manifest purpose of Congress in passing this law should prevail. We have already shown what that was. But the criticism is not sound. The section to be construed begins by declaring that these shares may be "included in the valuation of the personal property of the owner in assessing taxes imposed by authority of the State within which the association is located." This *valuation*, then, is part of the *assessment* of taxes. It is a necessary part of every assessment of taxes which is governed by a ratio or percentage. There can be no rate or percentage without a valuation. This taxation, says the act, shall not be at a greater rate than is assessed on other moneyed capital. What is it that shall not be greater? The answer is taxation. In what respect shall it not be greater than the *rate assessed* upon other capital? We see that Congress had in its mind an assessment, a *rate* of assessment, and a valuation, and taking all these together the taxation on these shares was not to be greater than on other moneyed capital.

If section 5219 of the Revised Statutes were to be so amended as to read as follows, it would cover the two points under consideration:

But the legislature of each State may determine and direct the manner and place of taxing all the shares of national banking associations located within the State, subject only to the two restrictions, that the maximum rate of taxation shall not exceed — per cent., and that the valuation shall not be at a greater rate than upon other moneyed capital in the hands of individual citizens of such State, and that the shares of any national banking association owned by non-residents of any State shall be taxed in the city or town where the bank is located, and not elsewhere.

Such an amendment would prevent excessive taxation in all the States, and should not effect the imposition of a less rate in any of the States. The valuation would necessarily be equal, and it is probable that the constitution of most of the States would prevent a discrimination against any particular class of moneyed capital.

## TABLES OF NATIONAL AND STATE TAXATION.

The Comptroller herewith presents his usual annual tables, giving, as far as can be ascertained, the amount of taxes imposed upon the banking capital of the country, and respectfully repeats his previous recommendation for the repeal of the law imposing a tax upon capital and deposits, and of the two-cent stamp tax upon bank checks.

The amount collected by the Commissioner of Internal Revenue during the last fiscal year was \$123,981,916, and the whole of this amount, with the exception of \$11,096,464.39, was derived from the tax on spirits, beer, and tobacco. Were the entire tax upon banks and bankers of the country, including the two-cent check tax, as well as the tax upon matches and patent medicines, removed, the amount of revenue received by the government from the tax on spirits, beer and tobacco, and from customs duties, would alone be sufficient to meet its expenses and reduce the public debt at the rate of at least seventy millions annually.

The principal reason heretofore urged against the repeal of these taxes has been that the amount produced was necessary for the support of the government; but this reason has ceased to exist. The repeal of the laws imposing taxes, not only upon the national banks, but also upon the State and private banks and savings-banks of the country—which institutions hold, as has been seen, one-third of the whole public debt of the United States—will indirectly aid the government in refunding the remainder of the debt at a low rate of interest, by increasing the demand and extending the market for its bonds, thus to a considerable extent saving to the government in interest what may be lost to it in revenue from taxes.

The enormous State taxes which the banks and bankers of the country have paid for a series of years, and still pay, and which are in a much greater ratio to values than are those imposed on any other species of property, are as much as should be imposed upon this great interest, and particularly at a time when the rates of interest throughout the country are being greatly reduced.

The following table for the year 1879, similar to the one for the year 1878, which was given in the last annual report of the Comptroller, shows the amount of United States and State taxes, and the rate of taxation paid by the national banks, in every State and principal city of the Union for that year. Similar tables for the years 1867 and 1869, and for the years from 1874 to 1878 inclusive, may be found in the appendix.

## TAXATION of NATIONAL BANKS.

States and Territories.	Capital.*	Amount of taxes.			Ratios to capital.		
		United States.	State.	Total.	United States.	State.	Total.
					<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
Maine.....	\$10,507,115	\$114,855	\$228,030	\$342,885	1.1	2.2	3.3
New Hampshire.....	5,686,257	65,138	97,950	163,088	1.2	1.7	2.9
Vermont.....	8,528,353	89,863	169,699	259,562	1.0	2.1	3.1
Massachusetts.....	44,302,447	517,410	719,029	1,237,030	1.2	1.6	2.8
Boston.....	50,445,725	678,371	675,691	1,354,062	1.3	1.3	2.6
Rhode Island.....	20,009,800	195,509	251,079	446,588	1.0	1.2	2.2
Connecticut.....	25,572,815	281,063	389,926	670,989	1.1	1.5	2.6
New England States	165,032,512	1,942,209	2,532,004	4,474,213	1.2	1.5	2.7

\*The capital of the banks that reported State, county, and municipal taxes on stock and real estate is \$452,869,712.

## TAXATION of NATIONAL BANKS—Continued.

States and Territories.	Capital.	Amount of taxes.			Ratios to capital.		
		United States.	State.	Total.	United States.	State.	Total.
					Per ct.	Per ct.	Per ct.
New York.....	32,973,066	511,243	637,489	1,148,732	1.5	2.0	3.5
New York City.....	50,813,657	1,299,166	1,466,570	2,765,736	2.6	2.9	5.5
Albany.....	1,920,229	56,177	50,532	106,709	2.9	2.5	5.4
New Jersey.....	13,553,308	205,856	241,370	447,235	1.5	1.8	3.3
Pennsylvania.....	28,513,098	408,310	191,626	599,936	1.4	0.7	2.1
Philadelphia.....	16,818,000	358,023	109,508	467,531	2.1	0.7	2.8
Pittsburgh.....	9,897,977	143,056	59,834	202,890	1.4	0.6	2.0
Delaware.....	1,763,985	25,527	6,215	31,742	1.4	0.4	1.8
Maryland.....	2,265,125	32,841	30,522	63,363	1.5	1.3	2.8
Baltimore.....	10,535,780	129,781	138,415	268,196	1.2	1.3	2.5
District of Columbia.....	252,000	4,509	130	4,639	1.8	0.1	1.9
Washington.....	1,125,000	15,624	4,049	19,673	1.4	0.4	1.8
<b>Middle States.....</b>	<b>170,431,205</b>	<b>3,190,113</b>	<b>2,936,269</b>	<b>6,126,382</b>	<b>1.0</b>	<b>1.7</b>	<b>3.6</b>
Virginia.....	2,947,500	49,380	53,710	103,090	1.7	1.9	3.6
West Virginia.....	1,656,000	21,523	26,915	48,438	1.3	1.6	2.9
North Carolina.....	2,500,884	31,586	38,356	69,942	1.3	1.6	2.9
South Carolina.....	2,450,000	28,709	49,787	78,496	1.2	2.0	3.2
Georgia.....	2,119,216	27,807	36,037	63,844	1.3	1.7	3.0
Florida.....	50,000	794	815	1,609	1.6	1.6	3.2
Alabama.....	1,662,000	20,267	81,530	51,797	1.2	2.0	3.2
New Orleans.....	2,875,000	50,212	13,144	63,356	1.7	0.5	2.2
Texas.....	1,050,000	15,439	19,596	35,035	1.5	1.9	3.4
Arkansas.....	205,000	3,217	2,870	6,087	1.6	1.4	3.0
Kentucky.....	7,027,974	82,347	39,814	122,161	1.2	0.6	1.8
Louisville.....	2,995,500	44,606	19,285	63,891	1.5	0.6	2.1
Tennessee.....	3,005,884	50,110	52,068	102,178	1.7	1.8	3.5
<b>Southern States.....</b>	<b>30,555,018</b>	<b>425,997</b>	<b>383,927</b>	<b>809,924</b>	<b>1.4</b>	<b>1.8</b>	<b>2.7</b>
Ohio.....	18,451,403	264,013	368,946	632,959	1.4	2.0	3.4
Cincinnati.....	4,108,333	79,722	99,415	179,137	1.9	2.4	4.3
Cleveland.....	3,887,500	50,530	78,862	129,392	1.3	2.0	3.3
Indiana.....	13,828,674	196,213	289,943	486,156	1.4	2.1	3.5
Illinois.....	11,068,214	169,594	194,416	364,010	1.5	1.8	3.3
Chicago.....	4,020,054	137,681	94,288	231,969	3.4	2.4	5.8
Michigan.....	7,263,673	96,743	118,018	214,761	1.3	1.6	2.9
Detroit.....	2,100,000	38,391	46,687	85,078	1.8	2.2	4.0
Wisconsin.....	2,530,093	41,295	44,425	85,720	1.6	1.8	3.4
Milwaukee.....	650,000	18,190	16,236	34,426	2.8	2.5	5.3
Iowa.....	5,809,832	86,537	118,056	204,593	1.5	2.1	3.6
Minnesota.....	4,662,307	65,598	85,475	151,073	1.4	1.8	3.2
Missouri.....	1,282,065	18,740	28,637	47,377	1.5	2.4	3.9
Saint Louis.....	2,650,000	47,910	55,642	103,552	1.8	2.1	3.9
Kansas.....	816,394	17,066	21,763	38,829	2.1	2.7	4.8
Nebraska.....	927,141	24,321	23,814	48,135	2.6	2.6	5.2
Colorado.....	1,050,000	34,545	35,412	69,957	3.3	3.4	6.7
Oregon.....	250,000	6,836	2,900	9,736	2.7	1.2	3.9
California*.....	1,559,045	19,645	4,229	23,874	1.3	0.3	1.6
San Francisco*.....	2,750,000	21,543	122	21,665	0.8	0.0	0.8
New Mexico.....	325,000	4,598	4,264	8,862	1.4	1.4	2.8
Utah.....	200,000	3,098	3,350	6,448	1.5	1.7	3.2
Idaho.....	100,000	1,434	3,478	4,912	1.4	3.5	4.9
Montana.....	200,000	5,416	4,477	9,893	2.7	3.0	5.7
Wyoming.....	125,000	2,403	2,731	5,134	1.9	2.2	4.1
Dakota.....	185,041	4,206	3,509	7,715	2.3	2.0	4.3
Washington.....	150,000	1,544	1,937	3,481	1.0	1.3	2.3
<b>Western States and Territories.....</b>	<b>90,949,769</b>	<b>1,457,812</b>	<b>1,751,032</b>	<b>3,208,844</b>	<b>1.6</b>	<b>2.0</b>	<b>3.6</b>
<b>Totals.....</b>	<b>456,968,504</b>	<b>7,016,131</b>	<b>7,603,232</b>	<b>14,619,363</b>	<b>1.5</b>	<b>1.7</b>	<b>3.2</b>

\* California banks pay no State taxes on capital, except on such as is invested in real estate.



The following table exhibits the amount of taxes annually paid by the national banks to the United States, from the establishment of the system to July 1, 1880, the rate of taxation being one per cent. annually upon the average amount of notes in circulation, one-half of one per cent. annually upon the average amount of deposits, and the same rate upon the average amount of capital not invested in United States bonds:

Years.	On circulation.	On deposits.	On capital.	Total.
1864.....	\$53,193 32	\$25,911 87	\$18,432 07	\$187,537 26
1865.....	733,247 50	1,047,530 86	133,251 15	1,954,029 60
1866.....	2,106,765 30	2,633,102 77	406,947 74	5,146,835 81
1867.....	2,868,036 78	2,650,180 09	321,881 36	5,840,098 23
1868.....	2,946,343 07	2,564,143 44	306,761 67	5,817,248 18
1869.....	2,957,416 73	2,614,553 58	312,918 68	5,884,888 99
1870.....	2,949,744 13	2,614,767 61	375,862 26	5,940,474 00
1871.....	2,987,021 69	2,802,840 85	385,292 13	6,175,154 67
1872.....	3,193,570 03	3,120,884 37	389,356 27	6,703,910 67
1873.....	3,353,186 13	3,196,569 29	454,891 51	7,004,646 93
1874.....	3,404,483 11	3,209,067 73	469,048 02	7,083,498 85
1875.....	3,283,450 80	3,514,263 39	507,417 76	7,305,134 04
1876.....	3,091,795 76	3,505,120 64	632,296 18	7,229,212 58
1877.....	2,900,957 53	3,451,965 38	660,784 80	7,013,707 81
1878.....	2,048,047 08	3,273,111 74	560,296 83	6,781,455 65
1879.....	3,009,647 16	3,309,668 90	401,920 61	6,721,236 67
1880.....	3,153,635 63	4,058,710 61	379,424 19	7,591,770 43
Aggregates.....	45,941,161 83	47,703,404 11	6,716,903 31	100,361,469 25

The table below gives the taxes annually paid under the United States laws, by banks other than national, to the Commissioner of Internal Revenue, on deposits, on circulation, and on capital, for the years from 1864 to 1880, inclusive. The rate of taxation imposed by United States laws on these banks, on account of their circulation, deposits and capital, is precisely the same as that imposed upon national banks. The present duties on their circulation, however, are derived mainly from the tax of ten per cent. imposed upon the amount of such circulation paid out by them:

Years.	On circulation.	On deposits.	On capital.	Totals.
1864.....	\$2,056,096 30	\$30,723 52	.....	\$2,837,719 83
1865.....	1,993,661 84	13,841 08	\$603,367 96	4,940,870 89
1866.....	990,278 11	39,635 83	374,074 11	3,463,988 05
1867.....	214,298 75	55,395 98	476,867 73	2,046,562 46
1868.....	28,669 88	18,512 77	399,562 90	1,866,745 55
1869.....	16,565 05	14,417 63	445,071 49	2,106,054 17
1870.....	15,419 94	77,576 46	827,087 21	3,020,083 61
1871.....	22,781 92	72,196 84	919,263 77	3,644,241 53
1872.....	8,019 82	13,251 71	976,057 61	4,628,229 14
1873.....	24,778 62	39,302 70	736,950 05	8,771,031 46
1874.....	16,738 26	13,544 26	916,878 15	8,367,160 67
1875.....	22,746 27	12,260 27	1,102,241 56	4,097,248 12
1876.....	17,947 67	39,530 75	989,219 61	4,096,698 03
1877.....	5,430 16	2,896,637 93	927,661 24	3,829,729 33
1878.....	1,118 73	2,583,687 29	697,225 84	3,492,031 85
1879.....	13,903 29	2,354,911 74	830,068 56	3,198,883 59
1880.....	28,773 37	2,510,775 43	811,436 48	3,350,985 28
Aggregates.....	5,479,027 97	39,766,202 28	12,533,033 21	57,778,263 56

It will be seen that of the whole amount of taxes paid to the United States, during the years given in the foregoing tables, by all the banks and bankers of the country, the national banks alone have paid nearly two-thirds. The amount of tax upon circulation has been \$45,941,162, while the cost to the government of the national system since its inauguration in 1863 has been but \$4,934,530.51.

From tables similar to the one first given herein for 1879, the follow-



ing condensed table has been prepared, which shows the taxes, national and State, paid by the national banks during each year from 1866 to 1879, inclusive. The figures given for the year 1868, and for the years from 1870 to 1873, inclusive, are estimated. With these exceptions the amounts of the taxes shown by this table are from complete data obtained by this Office.

Years.	Capital stock.	Amount of taxes.			Ratio of tax to capital.		
		United States.	State.	Total.	United States.	State.	Total.
					<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
1866 .....	\$410,593,435	\$7,949,451	\$8,069,938	\$16,019,389	1.9	2.0	3.9
1867 .....	422,804,666	9,525,607	8,813,127	18,338,734	2.2	2.1	4.3
1868 .....	420,143,491	9,465,652	8,757,656	18,223,308	2.2	2.1	4.3
1869 .....	419,619,860	10,081,244	7,297,096	17,378,340	2.4	1.7	4.1
1870 .....	429,314,041	10,100,682	7,465,675	17,566,357	2.4	1.7	4.1
1871 .....	451,994,133	10,649,895	7,860,078	18,509,973	2.4	1.7	4.1
1872 .....	472,956,958	6,703,910	8,343,772	15,047,682	1.4	1.8	3.2
1873 .....	488,778,418	7,004,646	8,499,748	15,504,394	1.4	1.8	3.2
1874 .....	493,751,679	7,256,083	9,620,326	16,876,409	1.5	2.0	3.5
1875 .....	503,687,911	7,317,531	10,058,122	17,375,653	1.5	2.0	3.5
1876 .....	501,788,079	7,076,087	9,701,732	16,777,819	1.4	2.0	3.4
1877 .....	485,250,604	6,902,573	8,829,304	15,731,877	1.4	1.9	3.3
1878 .....	471,064,238	6,727,232	8,056,533	14,783,765	1.4	1.7	3.1
1879 .....	456,968,504	7,016,131	7,603,232	14,619,363	1.5	1.7	3.2

In order that the great inequality of the percentage of these United States and State taxes to the capital of national banks in different geographical divisions of the country may be seen, the following tables have been prepared, giving for the years from 1875 to 1879, inclusive, the capital stock invested, and the percentage thereto of taxes paid, in each of such geographical divisions:

## TAXATION of NATIONAL BANKS.

1875.

Geographical divisions.	Capital.*	Amount of taxes.			Ratios to capital.		
		United States.	State.	Total.	United States.	State.	Total.
					<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
New England States.....	\$164,316,333	\$1,937,016	\$3,016,537	\$4,953,553	1.2	1.8	3.0
Middle States .....	193,585,507	3,300,498	4,062,459	7,362,957	1.7	2.1	3.8
Southern States .....	34,485,483	445,048	476,236	921,284	1.3	1.4	2.7
Western States and Terr's.	111,300,588	1,034,969	2,502,890	4,137,859	1.5	2.4	3.9
United States .....	503,687,911	7,317,531	10,058,122	17,375,653	1.5	2.0	3.5

1876.

New England States.....	\$168,068,379	\$1,947,970	\$2,914,808	\$4,862,778	1.2	1.7	2.8
Middle States .....	192,163,773	3,190,247	4,025,316	7,215,563	1.7	2.2	3.9
Southern States .....	33,439,193	423,781	431,164	854,945	1.3	1.3	2.6
Western States and Terr's.	108,116,734	1,514,089	2,330,444	3,844,533	1.4	2.3	3.7
United States .....	501,788,079	7,076,087	9,701,732	16,777,819	1.4	2.0	3.4

1877.

New England States.....	\$167,788,475	\$1,907,776	\$2,864,119	\$4,771,895	1.1	1.7	2.8
Middle States .....	182,885,562	3,129,990	3,544,862	6,674,852	1.7	1.9	3.6
Southern States .....	32,212,288	411,486	429,149	840,635	1.3	1.4	2.7
Western States and Terr's.	102,364,369	1,453,321	1,991,174	3,444,495	1.4	2.1	3.5
United States .....	485,250,694	6,902,573	8,829,304	15,731,877	1.4	1.9	3.3

\* The capital of the banks which reported State taxes in 1875 was \$493,738,408; in 1876, \$488,272,782; in 1877, \$474,667,771; in 1878, \$463,983,724, and in 1879, \$452,869,712.

TAXATION of NATIONAL BANKS—Continued.

1878.

Geographical divisions.	Capital.	Amount of taxes.			Ratios to capital.		
		United States.	State.	Total.	United States.	State.	Total.
					<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
New England States.....	\$166, 737, 594	\$1, 900, 735	\$2, 593, 043	\$4, 493, 778	1. 1	1. 6	2. 7
Middle States .....	176, 768, 399	3, 054, 576	3, 217, 485	6, 272, 061	1. 7	1. 8	3. 5
Southern States .....	31, 583, 348	409, 839	406, 076	815, 915	1. 3	1. 3	2. 6
Western States and Terr's.	95, 974, 897	1, 362, 082	1, 839, 929	3, 202, 011	1. 4	2. 0	3. 4
United States .....	471, 064, 238	6, 727, 232	8, 056, 533	14, 783, 765	1. 4	1. 7	3. 1

1879.

New England States.....	\$165, 032, 512	\$1, 942, 209	\$2, 532, 004	\$4, 474, 213	1. 2	1. 5	2. 7
Middle States .....	170, 431, 205	3, 190, 113	2, 936, 269	6, 126, 382	1. 9	1. 7	3. 6
Southern States .....	30, 555, 018	425, 997	383, 927	809, 924	1. 4	1. 3	2. 7
Western States and Terr's.	90, 949, 769	1, 457, 812	1, 751, 032	3, 208, 844	1. 6	2. 0	3. 6
United States .....	456, 968, 504	7, 016, 131	7, 603, 232	14, 619, 363	1. 5	1. 7	3. 2

In the foregoing tables there appears to be an inequality in the percentages of national taxation as well as in those of State taxation; but this inequality as to national taxation is in appearance only, and arises from the fact that while the rate of United States tax imposed on circulation, deposits, and capital is uniform as to all banks and in all parts of the country, yet in the tables there is given the percentage of the total tax to the capital only. Therefore, in those States where the deposits and circulation are large in proportion to capital the percentage of United States tax in the table is greater. In States where the deposits and circulation are proportionately smaller the percentage of such tax is less. In the case of State taxation the inequality is a real one, and represents very nearly the difference in the rates, as the only tax which can be laid by the States on national banks under the law must be laid directly on the shares of capital stock. It will be seen that the heaviest taxes are paid in the Western and Middle States, and the lightest in the Southern and Eastern. The table below shows for three different years the great inequality in the rates of State taxation paid in the principal cities of the country:

Cities.	Rates of taxation.								
	1877.			1878.			1879.		
	United States.	State.	Total.	United States.	State.	Total.	United States.	State.	Total.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
Boston .....	1. 3	1. 6	2. 9	1. 3	1. 3	2. 6	1. 3	1. 3	2. 6
New York.....	3. 1	2. 9	5. 0	2. 2	2. 9	5. 1	2. 6	2. 9	5. 5
Albany.....	3. 0	3. 2	6. 2	2. 8	2. 8	5. 6	2. 9	2. 5	5. 4
Philadelphia .....	2. 1	0. 7	2. 8	2. 0	0. 7	2. 7	2. 1	0. 7	2. 8
Pittsburgh .....	1. 4	0. 5	1. 9	1. 3	0. 5	1. 8	1. 4	0. 6	2. 0
Baltimore .....	1. 2	1. 0	3. 1	1. 2	1. 8	3. 0	1. 2	1. 3	2. 5
Washington.....	1. 3	0. 7	2. 0	1. 4	0. 6	2. 0	1. 4	0. 4	1. 8
New Orleans .....	1. 5	0. 9	2. 4	1. 5	1. 0	2. 5	1. 7	0. 5	2. 2
Louisville .....	1. 4	0. 5	1. 9	1. 4	0. 5	1. 9	1. 5	0. 6	2. 1
Cincinnati.....	1. 7	2. 9	4. 6	1. 5	2. 7	4. 2	1. 9	2. 4	4. 3
Cleveland .....	1. 1	2. 2	3. 3	1. 1	2. 0	3. 1	1. 3	2. 0	3. 3
Chicago .....	2. 2	2. 9	5. 8	2. 5	2. 6	5. 1	3. 4	2. 4	5. 8
Detroit.....	1. 6	1. 7	3. 3	1. 7	1. 5	3. 2	1. 8	2. 2	4. 0
Milwaukee.....	2. 4	2. 6	5. 0	2. 4	2. 6	5. 0	2. 8	2. 5	5. 3
Saint Louis.....	1. 4	2. 5	3. 9	1. 6	2. 4	4. 0	1. 8	2. 1	3. 9
Saint Paul.....	1. 3	1. 7	3. 0	1. 3	1. 5	2. 8	1. 5	1. 5	3. 0

All of the foregoing tables indicate the necessity of securing some uniform rule of State taxation, to which reference has already been made. The States in which the rates of State taxation were most excessive during the years 1877, 1878, and 1879 are shown in the table below:

States.	1877.			1878.			1879.		
	United States.	State.	Total.	United States.	State.	Total.	United States.	State.	Total.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
New York.....	1.9	2.7	4.6	2.0	2.6	4.6	1.5	2.0	3.5
New Jersey.....	1.4	1.9	3.3	1.4	1.8	3.2	1.5	1.8	3.3
Ohio.....	1.4	2.4	3.8	1.3	2.2	3.5	1.4	2.0	3.4
Indiana.....	1.2	2.3	3.5	1.3	2.1	3.4	1.4	2.1	3.5
Illinois.....	1.7	2.2	3.9	1.7	2.1	3.8	1.5	1.8	3.3
Wisconsin.....	1.7	2.1	3.8	1.7	2.2	3.9	1.6	1.8	3.4
Kansas.....	1.7	2.6	4.3	1.6	2.6	4.2	2.1	2.7	4.8
Nebraska.....	2.3	2.3	4.6	2.3	2.6	4.9	2.6	2.6	5.2
South Carolina.....	1.0	2.6	3.6	1.0	2.1	3.1	1.2	2.0	3.2
Tennessee.....	1.6	2.2	3.8	1.6	2.1	3.7	1.7	1.8	3.5

The statistics given show that, year by year, the States collect more from the national banks in taxes than does the United States; that on an average, during the past twelve years, the total annual amount paid to both State and national governments by such banks has been about sixteen millions of dollars, or nearly four per cent. upon the capital stock; and that during the past year it was \$14,619,363, or more than four and one-half per cent. upon the amount of circulation issued to the banks then in operation.

#### THE LOSSES, SURPLUS, EARNINGS AND DIVIDENDS OF THE NATIONAL BANKS.

Section 5204 of the Revised Statutes provides that no association, or any member thereof, shall, during the time it shall continue its banking operations, withdraw, or permit to be withdrawn, either in the form of dividends or otherwise, any portion of its capital. If losses have, at any time, been sustained by any such association, equal to or exceeding its undivided profits then on hand, no dividend shall be made; and no dividend shall ever be made by any association, while it continues its banking operations, to an amount greater than its net profits then on hand, deducting therefrom its losses and bad debts. And section 5212 requires that each association shall report to the Comptroller of the Currency, within ten days after declaring any dividend, the amount of such dividend, and the amount of net earnings in excess of such dividend.

These reports, which are made semi-annually, give full information from each bank of its dividends, earnings, and losses for the period named; and from these reports tables have been prepared in this Office for a series of years, containing items of great interest, and of a kind never before regularly given to the public in reference to the gains and losses of any class of corporations. The following table exhibits by States and reserve cities the number of banks which have charged off losses, and the amount of losses charged off by them, in each of the two periods of six months, ending on March 1 and September 1, 1880, together with the total amount for the year; to

which have been added the amounts charged off in each of the four preceding years:

States and Territories.	March 1, 1880.		September 1, 1880.		Total losses.
	No. of banks.	Losses.	No. of banks.	Losses.	
Maine.....	41	\$130,010 53	34	\$69,539 69	\$199,550 22
New Hampshire.....	20	41,876 40	18	71,442 47	113,318 93
Vermont.....	31	79,400 77	27	118,218 52	197,619 29
Massachusetts.....	140	723,231 40	124	817,486 42	1,540,717 82
Boston.....	42	648,327 16	44	462,504 56	1,110,831 72
Rhode Island.....	38	409,957 46	23	107,723 02	517,680 48
Connecticut.....	50	204,124 51	56	219,743 28	423,867 79
New York.....	156	807,652 59	147	615,797 81	1,423,450 40
New York City.....	42	1,254,820 30	42	799,561 22	2,054,381 52
Albany.....	5	84,808 40	5	137,604 52	222,412 92
New Jersey.....	51	167,975 14	52	194,659 42	362,634 56
Pennsylvania.....	118	354,603 98	120	578,609 19	933,273 17
Philadelphia.....	25	151,038 53	26	248,305 21	399,943 74
Pittsburgh.....	18	140,404 90	17	111,723 25	258,128 15
Delaware.....	2	1,499 67	5	1,448 96	2,948 63
Maryland.....	13	16,335 22	8	34,007 98	50,343 20
Baltimore.....	12	142,318 89	12	69,010 12	211,329 01
District of Columbia.....			1	2,675 85	2,675 85
Washington.....	4	24,259 28	5	24,405 90	48,665 27
Virginia.....	14	32,377 06	16	58,088 88	90,465 94
West Virginia.....	5	8,526 48	7	5,276 56	13,803 04
North Carolina.....	8	10,532 50	10	114,227 87	124,760 46
South Carolina.....	8	74,413 21	7	211,985 00	286,398 21
Georgia.....	8	58,452 91	9	50,511 65	108,964 56
Florida.....	1	7,398 05	1	5,039 33	12,437 38
Alabama.....	7	27,782 38	6	20,433 19	48,215 57
New Orleans.....	7	43,970 39	7	74,109 99	118,080 38
Texas.....	9	45,602 59	9	63,714 77	109,407 36
Arkansas.....	1	505 05	2	3,879 67	4,384 72
Kentucky.....	33	124,578 02	26	94,903 29	219,481 31
Louisville.....	7	59,588 63	7	23,651 44	83,240 07
Tennessee.....	13	36,951 78	17	61,224 48	98,176 26
Ohio.....	88	262,396 12	98	311,625 14	574,021 26
Cincinnati.....	3	43,877 37	4	45,274 42	89,151 79
Cleveland.....	5	48,854 98	4	72,486 88	121,341 86
Indiana.....	55	211,193 66	59	280,377 16	491,570 82
Illinois.....	74	251,963 13	73	187,150 79	439,113 92
Chicago.....	6	73,098 40	7	37,977 46	111,075 86
Michigan.....	57	101,475 26	53	127,574 72	229,049 98
Detroit.....	3	5,053 87	2	8,381 00	13,434 87
Wisconsin.....	20	27,168 62	16	27,133 47	54,302 09
Milwaukee.....	3	30,092 55	3	33,779 52	63,872 07
Iowa.....	39	64,725 99	38	96,874 86	161,600 85
Minnesota.....	23	201,930 44	20	38,035 14	239,965 58
Missouri.....	9	40,628 58	9	10,594 55	51,223 13
Saint Louis.....	4	80,930 44	5	121,416 43	202,346 87
Kansas.....	8	20,281 86	7	39,479 52	59,761 38
Nebraska.....	4	14,004 18	8	88,243 87	102,248 05
Colorado.....	12	44,205 66	12	107,266 40	151,472 06
Oregon.....	1	2,372 60	1	2,975 00	5,347 60
California.....	7	47,263 87	3	12,558 30	59,822 17
San Francisco.....	1	19,456 21	1	9,383 73	28,839 94
New Mexico.....	2	28,241 57	2	7,076 85	35,318 42
Utah.....	1	1,918 75	1	1,504 27	3,423 02
Montana.....	2	8,552 30	2	1,805 20	10,357 50
Wyoming.....	2	4,192 51	2	529 71	4,722 22
Dakota.....	2	9,992 79	1	1,441 97	11,434 76
Totals for 1880.....	1,360	7,563,886 04	1,321	7,142,519 96	14,706,406 00
Add for 1879.....	1,421	10,238,324 98	1,442	11,487,330 17	21,725,655 15
Add for 1878.....	1,304	10,903,145 04	1,430	13,563,654 85	24,466,799 89
Add for 1877.....	980	8,175,960 56	1,108	11,757,627 43	19,933,587 99
Add for 1876.....	806	6,501,169 82	1,034	13,217,856 60	10,719,026 42
Aggregate losses for five years.....		43,382,486 44		57,168,989 01	100,551,475 45

Similar tables for the years 1876, 1877, 1878, and 1879 are given in the appendix. In the following table the total losses charged off in each geographical division of the country during the last five years are shown, with the number of banks reporting losses :

Six months ending—	New England States.		Middle States.		Southern States.		Western States and Territories.		United States.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
March 1, 1876 .....	201	\$1,485,532	268	\$3,553,129	67	\$308,861	270	\$1,153,648	806	\$0,501,170
September 1, 1876 ..	282	3,074,128	344	7,156,349	90	896,891	318	2,090,489	1,034	13,217,857
Total, 1876 .....	.....	4,559,660	.....	10,709,478	.....	1,205,752	.....	3,244,137	.....	19,719,027
March 1, 1877 .....	289	2,465,328	314	3,462,684	80	478,252	297	1,769,697	980	8,175,961
September 1, 1877 ..	312	4,825,040	353	3,945,806	86	511,841	357	2,474,940	1,108	11,757,627
Total, 1877 .....	.....	7,290,368	.....	7,408,490	.....	990,093	.....	4,244,637	.....	19,933,588
March 1, 1878 .....	327	3,344,012	417	4,506,813	124	672,032	436	2,380,288	1,304	10,903,145
September 1, 1878 ..	390	4,016,814	449	5,502,770	140	1,225,602	442	2,818,469	1,430	13,563,655
Total, 1878 .....	.....	7,360,826	.....	10,009,583	.....	1,897,634	.....	5,198,757	.....	24,466,800
March 1, 1879 .....	379	3,612,128	459	3,592,950	125	696,646	458	2,336,600	1,421	10,238,324
September 1, 1879 ..	384	3,388,394	463	4,360,440	139	1,235,784	456	2,502,712	1,442	11,487,330
Total, 1879 .....	.....	7,000,522	.....	7,953,390	.....	1,932,430	.....	4,839,312	.....	21,725,654
March 1, 1880 .....	362	2,236,928	446	3,152,317	121	530,709	431	1,643,872	1,360	7,563,886
September 1, 1880 ..	326	1,866,658	440	2,817,870	124	787,046	431	1,670,946	1,321	7,142,520
Total, 1880 .....	.....	4,103,586	.....	5,970,187	.....	1,317,815	.....	3,314,818	.....	14,706,406
Total for five years .....	.....	30,314,962	.....	42,051,128	.....	7,343,724	.....	20,841,661	.....	100,551,475

It will be seen from the foregoing table that the total losses charged off by the banks during the current year were \$14,706,406, and for the four previous years \$85,845,069, making an aggregate of more than one hundred millions of dollars of losses which the banks have sustained during the five years named. Of the \$72,656,488 of losses charged off within the last three and a half years, \$10,835,760 was on account of depreciation in the premium on United States bonds held by the banks. The amount of premium thus charged off during the past year was \$2,196,353. The total losses charged off during the last five years are more than 21 per cent. of the entire capital of the banks.

The amount of losses sustained during the last five years by the national banks in several of the principal cities of the United States is shown in the following table:

Cities.	1876.	1877.	1878.	1879.	1880.	Total.
New York .....	\$6,873,759 97	\$4,247,941 66	\$5,147,319 98	\$3,135,557 37	\$2,054,381 52	\$21,458,960 50
Boston .....	1,598,722 68	2,192,053 81	2,490,197 46	2,655,390 58	1,110,831 72	10,047,196 25
Philadelphia .....	152,976 14	333,248 47	561,676 30	491,558 36	399,943 74	1,939,403 01
Pittsburgh .....	333,851 56	280,466 59	419,036 51	333,022 99	258,128 15	1,633,505 80
Baltimore .....	876,267 32	200,597 74	368,915 99	294,507 00	211,329 01	1,951,557 06
New Orleans .....	519,701 41	286,259 47	338,496 90	272,889 87	118,080 38	1,535,428 03

These losses have to a considerable extent been charged to the current profits of the banks. In some instances, however, where the losses were large, they have been partly met from the accumulated profits and partly from the surplus account. In extreme cases they have been met, either by assessment upon the shareholders, or by a reduction of the

capital stock under section 5143 Revised Statutes. The law requiring losses to be charged off before dividends are paid is rigidly enforced, in order that the reports of the banks may show as far as possible their true condition. These enormous losses are largely attributable to the general depression which, from 1873 to 1879, affected all branches of trade and industry, and it is a gratifying fact to know that the losses for the present year are considerably less than for any of the four years preceding, being \$7,019,249 less than for 1879, and \$9,760,394 less than for 1878.

### *Surplus.*

The law provides that a surplus fund shall be accumulated, by setting aside, before the usual semi-annual dividend is declared, one-tenth part of the semi-annual net profits of the bank. In some cases this legal surplus now exceeds the capital of the bank. The capital and the surplus together form the working fund of the bank, each contributing to its ultimate profits; and the banks which make the largest dividends in proportion to their capital are those which have accumulated a large surplus, such dividends being really earned by capital and surplus combined.

The following table shows the growth of surplus from the commencement of the system to the present time, as nearly as possible by semi-annual periods, with the increase or decrease for each period:

Dates.	Surplus.		Dates.	Surplus.	
	Amount.	Semi-annual increase or decrease.		Amount.	Semi-annual increase or decrease.
		<i>Increase.</i>			<i>Increase.</i>
	\$1,129,910		June 13, 1873.....	\$110,847,455	\$5,437,296
	8,903,311	\$7,533,401	December 28, 1873 ..	120,961,268	9,113,813
	21,303,500	22,640,255	June 20, 1874 .....	126,239,898	5,278,640
	43,000,371	11,696,805	December 31, 1874 ..	130,485,641	4,245,743
	50,151,992	7,151,621	June 30, 1875.....	133,169,095	2,683,454
	60,992,875	9,840,883			<i>Decrease.</i>
	63,232,811	3,239,936	December 17, 1875 ..	133,085,422	\$83,672
	70,586,126	7,253,315	June 30, 1876.....	131,897,197	1,188,225
	75,840,119	5,253,993	December 22, 1876 ..	131,390,605	596,592
	81,169,937	5,329,818	June 22, 1877 .....	124,714,073	6,676,532
	82,218,676	1,048,639	December 28, 1877 ..	121,568,455	3,145,618
	90,174,281	7,955,705	June 29, 1878.....	118,178,531	3,389,924
	91,689,834	1,515,553	January 1, 1879 ...	118,200,664	1,977,607
	94,703,740	3,013,906	June 14, 1879.....	114,321,370	1,879,469
	98,322,204	3,618,464			<i>Increase.</i>
December 16, 1871 .....	101,573,154	3,250,950	December 12, 1879 ..	115,429,032	\$1,107,656
June 10, 1872 .....	105,181,943	3,608,789	June 11, 1880.....	118,102,014	2,672,982
December 27, 1872 .....	111,410,249	6,228,306			

### *Dividends and earnings.*

Since the year 1869, the banks have been required to make semi-annual returns of their dividends and earnings. From these reports tables have been prepared, showing their profits and dividends, and the ratio of such profits, not alone to capital, but to capital and surplus combined, since the surplus contributes proportionately as much to the semi-annual profits from which dividends are derived as does the capital.

The following table shows the capital, surplus, dividends, and total earnings of all the national banks for each half year, from March 1, 1869,



to September 1, 1880, together with the ratio of dividends to capital and to capital and surplus, and of earnings to capital and surplus:

Period of six months ending—	No. of banks.	Capital.	Surplus.	Total dividends.	Total net earnings.	RATIOS.		
						Divi- dends to capital.	Dividends to capital and sur- plus.	Earnings to capital and sur- plus.
						Per cent.	Per cent.	Per cent.
Sept. 1, 1869	1,481	\$401,650,802	\$82,105,848	\$21,767,831	\$29,221,184	5.42	4.50	6.04
Mar. 1, 1870	1,571	416,366,991	86,118,210	21,479,095	28,990,934	5.18	4.27	6.77
Sept. 1, 1870	1,601	425,317,104	91,630,620	21,080,343	29,813,885	4.96	4.08	6.19
Mar. 1, 1871	1,605	428,609,103	94,672,401	22,203,150	27,243,103	5.18	4.24	6.21
Sept. 1, 1871	1,693	446,909,364	98,286,591	23,125,279	27,315,311	4.96	4.07	6.03
Mar. 1, 1872	1,750	453,706	99,431,243	22,850,820	27,502,539	5.07	4.16	6.09
Sept. 1, 1872	1,852	467,023	105,181,942	23,827,289	30,572,891	5.12	4.17	6.06
Mar. 1, 1873	1,913	478,683	114,257,268	24,820,061	31,926,478	5.23	4.21	6.41
Sept. 1, 1873	1,955	490,951	118,113,848	24,823,029	33,122,000	5.09	4.09	6.46
Mar. 1, 1874	1,967	490,323	123,469,859	23,529,998	29,544,120	4.81	3.84	6.02
Sept. 1, 1874	1,971	498,284	128,384,039	24,929,307	30,036,811	5.09	4.08	6.36
Mar. 1, 1875	2,007	508,831	131,560,637	24,750,816	29,136,007	5.01	3.96	6.09
Sept. 1, 1875	2,047	514,833	134,123,649	24,317,785	28,600,217	4.88	3.85	6.56
Mar. 1, 1876	2,078	520,461	134,467,593	24,811,581	22,007,921	4.92	3.88	6.09
Sept. 1, 1876	2,081	522,271	132,251,078	22,503,829	20,540,231	4.50	3.57	6.25
Mar. 1, 1877	2,080	511,580	130,872,165	21,803,999	19,592,903	4.39	3.47	6.12
Sept. 1, 1877	2,072	514,860	124,349,254	22,117,116	15,274,028	4.54	3.62	6.59
Mar. 1, 1878	2,074	507,751	122,373,561	18,892,300	16,846,606	3.99	3.17	6.89
Sept. 1, 1878	2,047	511,896	118,087,134	17,959,223	13,658,893	3.81	3.04	6.31
Mar. 1, 1879	2,043	513,896	116,744,135	17,541,054	14,678,060	3.78	3.02	6.33
Sept. 1, 1879	2,045	513,056	115,149,351	17,401,867	16,873,200	3.82	3.06	6.96
Mar. 1, 1880	2,046	510,090	117,326,501	18,121,273	21,152,784	3.99	3.17	6.79
Sept. 1, 1880	2,072	515,062	120,146,949	18,290,280	24,033,250	4.03	3.18	6.18

The following statement shows by geographical divisions the number of national banks, with their capital, which have paid no dividends to their stockholders during the two semi-annual periods of 1880, together with the totals for each semi-annual period in the four preceding years:

Geographical divisions.	Six months ending—				Average for the year.	
	March 1, 1880.		September 1, 1880.			
	No. of banks.	Capital.	No. of banks.	Capital.	No. of banks.	Capital.
New England States.....	30	\$6,965,000	15	\$3,025,000	23	\$4,995,000
Middle States.....	68	9,930,000	73	9,138,000	70	9,548,500
Southern States.....	29	4,120,000	27	3,945,900	28	4,037,450
Western States and Territories.....	90	9,354,200	118	10,225,250	109	9,789,725
Totals for 1880.....	226	\$30,407,200	233	26,334,150	230	28,370,675
Totals for 1879.....	309	53,843,700	290	44,576,300	304	49,210,000
Totals for 1878.....	328	48,797,900	357	58,730,950	343	53,767,425
Totals for 1877.....	245	40,452,000	288	41,166,200	260	40,809,100
Totals for 1876.....	235	34,200,320	273	44,057,725	254	39,174,022
Average for five years.....	269	41,558,234	290	42,974,205	279	42,266,244

The number of banks passing dividends in the first dividend period of 1880 was 226, with a total capital of \$30,407,200; in the second period the number was 233, with a capital of \$26,334,150; while during the last five years the average number of banks semi-annually passing dividends on account of losses has been 279. The average amount of capital upon which no dividends have been paid during that time is \$42,266,244. From these facts it follows that, for a continuous period of five years, about one-seventh of the whole number of banks in operation have paid no dividends, and that nearly one-tenth of the total capital has been unremunerative.

The percentage to capital of dividends paid, and of dividends #

earnings to combined capital and surplus, is given by similar divisions in the following table, for the years 1878, 1879, and 1880:

Geographical divisions.	1878.			1879.			1880.		
	Divi- dends to capital.	Divi- dends to capital and sur- plus.	Earnings to capital and sur- plus.	Divi- dends to capital.	Divi- dends to capital and sur- plus.	Earnings to capital and sur- plus.	Divi- dends to capital.	Divi- dends to capital and sur- plus.	Earnings to capital and sur- plus.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>
New England States.....	6.9	5.5	4.3	6.4	5.2	4.2	6.8	5.5	6.4
Middle States.	7.9	6.1	4.9	7.9	6.1	5.8	8.4	6.5	8.6
Southern States	7.3	6.2	5.7	7.0	6.0	5.4	7.8	6.7	7.0
Western States and Territo- ries.....	9.6	7.8	6.9	9.4	7.5	7.1	9.5	7.6	9.3
United States..	7.8	6.2	5.1	7.6	6.1	5.5	8.0	6.4	7.9

#### UNITED STATES LEGAL-TENDER NOTES AND NATIONAL BANK CIRCULATION.

The acts of February 25, 1862, July 11, 1862, and March 3, 1863, each authorized the issue of 150 millions of dollars of legal-tender notes, making an aggregate of 450 millions of dollars. On January 30, 1864, the amount of such notes outstanding was \$449,338,902, which was the highest amount outstanding at any one time.

The act of June 30, 1864, provided that the total amount of United States notes issued or to be issued should not exceed 400 millions of dollars, and such additional sum, not exceeding 50 millions, as may be temporarily required for the redemption of temporary loans.

The act of April 12, 1866, authorized the retiring and cancellation of not more than 10 millions of legal-tender notes, within six months from the passage of the act, and thereafter not more than 4 millions in any one month; and under this act the amount outstanding was so far reduced that on December 31, 1867, the amount was 356 millions. On February 4, 1868, the further reduction of the volume of legal-tender notes was prohibited, leaving the last-named amount outstanding until October 1, 1872. Between that date and January 15, 1874, the amount was increased to \$382,979,815, and on June 20, 1874, the maximum amount was fixed at \$382,000,000; section 6 of the act of that date providing that "the amount of United States notes outstanding and to be used as a part of the circulating medium shall not exceed the sum of 382 millions, which said sum shall appear in each monthly statement of the public debt, and no part thereof shall be held or used as a reserve."

Section 3 of the act of January 14, 1875, authorized an increase of the circulation of national banks in accordance with existing law, without respect to the limit previously existing, and required the Secretary of the Treasury to retire legal-tender notes to an amount equal to 80 per cent. of the national bank notes thereafter issued, until the amount of such legal-tender notes outstanding should be 300 millions, and no more.

Under the operation of this act \$35,318,984 of legal tender notes were retired, leaving the amount in circulation on May 31, 1878, the date of the repeal of the act, \$346,681,016, which is the amount now outstanding. The act of February 25, 1863, and the subsequent act of June 3, 1864, authorized the issue of 300 millions of dollars of national bank circulation, which amount was increased by the act of July 12, 1870, to 354 millions. The act of June 20, 1874, authorized any national bank desiring

to withdraw its circulating notes, in whole or in part, to deposit lawful money with the Treasurer of the United States in sums of not less than nine thousand dollars, and to withdraw a proportionate amount of bonds held as security for such notes; and the act of January 14, 1875, repealed all previous provisions restricting the aggregate amount of national bank circulation. Subsequent to the passage of the acts of June 20, 1874, and of January 14, 1875, which authorized the retirement and reissue of national bank notes at the pleasure of the banks the circulation steadily decreased in volume until the year 1877, the total decrease in this interval being \$30,869,655. During the year ending November 1, 1878, there was an increase of \$4,216,684, and during the year ending November 1, 1879, an increase of \$14,742,503, the total amount now outstanding being \$9,343,288 less than on January 14, 1875.

The act of March 3, 1865 (section 5171 Revised Statutes), which was passed at a time when the legal limit of bank circulation was 300 millions of dollars, proportioned the amount to be issued by each bank to the amount of its capital. Banks having a capital of less than 500 thousand dollars were limited to 90 per cent. of such capital; those whose capital was between 500 thousand dollars and one million to 80 per cent.; those whose capital exceeded one million and was less than three millions, to 75 per cent.; and that class of banks whose capital exceeded three millions, to 60 per cent. of their capital.

The increase in the issue of circulating notes during the present year has been but \$6,783,864, of which more than one-half was issued to banks recently organized. The profit upon circulation does not exceed one and one-half per cent. per annum, and many banks have reduced their bonds, thus retiring a part of their circulation, in order to avail themselves of the existing high rates of premium, which premium is now equal to the profits upon circulation for six years. While the present small profit upon circulation continues, but little elasticity in the currency can be expected. The New York free-banking act authorized the banks of that State to issue currency without regard to capital, upon the deposit of the necessary amount of bonds. Such legislation by Congress would undoubtedly give elasticity to the national currency, but it would also stimulate a desire to organize banks of circulation only, and it is not recommended.

The bill now pending in Congress authorizes all banks to receive circulation equal to the full amount of their capital, as was the case in the original bank act. The passage of this bill would give the banks the privilege of increasing their circulation up to the limit of their capital, if at certain seasons of the year such an increase should be desirable. This increase would not probably be great, for the amount of circulation outstanding is now much less than that authorized by law, as may be seen in the following table:

Geographical divisions.	Banks having capital not exceeding \$500,000.		Banks having capital exceeding \$500,000.		Total.	
	Issued.	Uncalled for.	Issued.	Uncalled for.	Issued.	Uncalled for.
New England States.....	\$79,322,430	\$7,046,703	\$43,014,500	\$11,485,238	\$122,336,930	\$18,532,001
Middle States.....	82,940,955	9,291,590	29,681,740	21,094,833	112,622,695	30,386,423
Southern States.....	23,162,985	2,620,845	1,370,000	510,000	24,532,985	3,130,845
Western States.....	52,284,710	11,620,690	5,707,380	4,552,620	57,992,090	16,173,310
Pacific States and Territories.....	3,244,700	935,800	640,000	560,000	3,884,700	1,495,800
United States.....	240,955,780	31,515,688	80,413,620	38,202,691	321,369,400	69,718,379

It will be seen that the banks already organized and in operation are entitled to receive nearly 70 millions of additional circulation, whenever they may see fit to deposit United States bonds to secure it. This table also shows that the profit upon circulation is, as has been already stated, very small, otherwise the banks would avail themselves of the privilege of issuing additional notes. There is, however, a certain class of banks, with capital exceeding 500 thousand dollars, that would find it convenient during the fall season of the year, when currency is in demand, to increase their circulation, notwithstanding the high price of bonds, to the amount of their capital if authorized to do so, and the passage of the bill now pending is recommended.

Since the passage of the act of June 20, 1874, \$104,075,752 of legal-tender notes have been deposited in the Treasury by the national banks, for the purpose of reducing their circulation, and \$87,329,415 of bank notes have been redeemed, destroyed and retired.

The following table exhibits the amount and kinds of outstanding paper currency of the United States and of the national banks, on August 31, 1865, when the public debt reached its maximum, and annually thereafter at the dates named, with the currency price of gold and the gold price of currency at the same dates:

Date.	United States issues.			Notes of national banks including gold notes.	Aggregate.	Currency price of \$100 gold.	Gold price of \$100 currency.
	Legal tender notes.	Old demand notes.	Fractional currency.				
August 31, 1865...	\$432,553,912	\$402,985	\$26,344,742	\$176,213,955	\$635,515,574	\$144 25	\$99 32
January 1, 1866...	425,839,319	392,070	26,000,420	298,588,419	750,820,228	144 50	99 29
January 1, 1867...	380,276,160	221,632	28,732,812	299,846,206	709,076,860	133 00	75 18
January 1, 1868...	356,000,000	159,127	31,597,583	299,747,569	687,504,279	133 25	75 04
January 1, 1869...	356,000,000	128,098	34,215,715	299,629,322	680,973,135	135 00	74 07
January 1, 1870...	356,000,000	113,098	39,762,664	299,904,029	695,779,791	120 00	83 38
January 1, 1871...	356,000,000	101,086	39,995,089	306,307,672	702,403,847	110 75	90 29
January 1, 1872...	357,500,000	92,801	40,767,877	328,465,431	726,826,109	109 50	91 82
January 1, 1873...	358,557,907	84,387	45,722,061	344,582,812	748,947,167	112 00	89 28
January 1, 1874...	378,401,702	79,637	48,544,792	350,848,236	777,874,367	110 25	90 76
January 1, 1875...	382,000,000	72,817	46,390,598	354,128,250	782,591,165	112 50	88 89
January 1, 1876...	371,827,220	69,642	44,147,072	346,479,756	762,523,690	112 75	88 69
January 1, 1877...	366,055,084	65,462	26,348,206	321,595,606	714,064,358	107 00	93 46
January 1, 1878...	349,943,776	63,532	17,764,109	321,672,505	689,443,922	102 87	97 21
January 1, 1879...	346,681,016	62,035	16,108,159	323,791,674	686,642,884	100 00	100 00
January 1, 1880...	346,681,016	61,350	15,674,304	342,387,336	704,804,006	100 00	100 00
November 1, 1880.	346,681,016	60,825	7,181,861	343,834,107	697,757,809	100 00	100 00

The amount of additional circulation issued for the year ending November 1, 1880, was \$13,402,215; the amount issued to banks organized during the year was \$3,662,200; the amount retired was \$6,618,351, the actual increase for the year being \$6,783,864. During the year ending November 1, 1880, lawful money to the amount of \$13,845,866 was deposited with the Treasurer to retire circulation, of which amount \$947,326 was deposited by banks in liquidation. The amount previously deposited under the act of June 20, 1874, was \$72,786,458, and by banks in liquidation \$17,443,428, to which is to be added a balance of \$3,813,675 remaining from deposits made by liquidating banks prior to the passage of that act. Deducting from the total, \$107,889,427, the amount of circulating notes redeemed and destroyed without reissue (\$87,329,415), there remained in the hands of the Treasurer on November 1, 1880, \$20,560,012 of lawful money for the redemption and retirement of bank circulation.

The following table exhibits by States the issue and retirement of

circulation during the year ending November 1, 1880, and the total amount issued and retired since June 20, 1874:

States and Territories.	Circulation issued.	Circulation retired.		
		Under act of June 20, 1874.	Of liquidating banks.	Total.
Maine.....		\$8,565	\$25,554	\$34,119
New Hampshire.....	\$127,500	1,809	6,850	8,219
Vermont.....	127,350	30,537	21,947	52,484
Massachusetts.....	3,693,885	493,667	9,397	503,064
Rhode Island.....	464,770	102,279	2,164	104,443
Connecticut.....	74,110	229,155	2,865	232,020
New York.....	1,898,160	1,699,886	162,211	1,862,097
New Jersey.....	10,500	141,452	46,301	187,753
Pennsylvania.....	2,030,890	370,085	90,789	461,474
Delaware.....	59,000			
Maryland.....	378,750	62,041	3,307	65,348
District of Columbia.....	1,000	15,260	15,452	30,712
Virginia.....	126,000	43,550	38,200	81,750
West Virginia.....	163,440	28,140	15,126	43,266
North Carolina.....	18,000	52,486	13,080	65,566
South Carolina.....	40,500	16,304		16,304
Georgia.....	49,500	7,505	12,128	19,633
Florida.....	27,000			
Alabama.....		36,235	7,783	44,018
Mississippi.....			75	75
Louisiana.....	1,000	98,920	13,770	112,690
Texas.....	252,000		3,655	3,655
Arkansas.....	27,000	8,722	130	8,852
Kentucky.....	211,500	65,398	34,896	100,294
Tennessee.....	112,370	13,155	28,077	41,232
Missouri.....	153,000	83,216	102,674	185,890
Ohio.....	704,600	245,521	115,674	361,195
Indiana.....	365,800	560,747	111,879	672,626
Illinois.....	488,790	196,949	154,551	351,500
Michigan.....	522,600	125,946	35,984	161,880
Wisconsin.....	153,000	50,786	52,555	103,341
Iowa.....	243,000	26,490	66,207	92,697
Minnesota.....		49,150	31,385	80,535
Nebraska.....			49,435	49,435
Colorado.....		9,274	2,701	11,975
Idaho.....	36,000		230	230
Oregon.....				
California.....	117,000		12,165	12,165
Utah.....	45,000		3,829	3,829
Montana.....	67,500		26,687	26,687
Wyoming.....	3,600			
New Mexico.....	45,000			
Dakota.....	76,500			
Washington.....				
Surrendered to this office and retired.....				425,298
Total.....	13,402,215	4,873,890	1,319,163	6,193,053
Totals from June 20, 1874, to October 31, 1879.....	78,346,060	66,261,458	14,874,904	81,136,362
Surrendered to this office between same dates.....				11,369,582
Total issued and retired from June 20, 1874, to October 31, 1880.....	91,748,275	71,135,348	16,194,067	87,329,942

#### LOST OR UNREDEEMED BANK NOTES.

In his report for 1875 the Comptroller gave some statistics in relation to the percentage of bank notes not presented for redemption under State laws. Returns were given for 286 banks in the State of New York, which included thirty banks now in operation in the city of New York, either as State or national institutions. The maximum amount of circulation issued to the 286 banks was \$50,754,515, and the total circulation then outstanding was \$1,336,337, showing that the proportion of unredeemed circulation was 2.63 per cent. only of the amount issued. The maximum amount of circulation issued to the thirty banks in the city of New York was \$7,763,010, and the amount remaining unredeemed in October, 1875, was \$142,365. The percentage of that unredeemed to



that issued was 1.83. The lowest percentage of unredeemed circulation was 0.58, upon an issue of \$241,174. The highest was 4.81, upon an issue of \$123,974, seventeen banks of the thirty reporting the percentage of unredeemed notes outstanding at less than two per cent.

In his report for 1876 the following table was given, showing the greatest amount of circulation issued to 707 banks organized under the laws of twelve different States, the amount outstanding, and the percentage unredeemed, which was 2.35 only.

States.	Number of banks.	Greatest circulation.	Circulation outstanding.	Percentage unredeemed.
Maine .....	29	\$3, 375, 130	\$53, 102	1. 6
New Hampshire .....	27	2, 520, 339	35, 660	1. 4
Vermont .....	16	3, 143, 348	37, 027	1. 2
Massachusetts .....	41	10, 986, 357	254, 954	2. 3
Rhode Island .....	44	6, 369, 652	158, 834	2. 5
Connecticut .....	53	12, 850, 554	253, 190	2. 0
New York .....	286	50, 754, 515	1, 336, 337	2. 6
New Jersey .....	25	7, 111, 047	162, 961	2. 3
Delaware .....	5	950, 770	35, 401	3. 7
Maryland .....	16	6, 847, 844	172, 669	2. 5
Ohio .....	25	2, 196, 381	61, 340	2. 8
Wisconsin .....	140	7, 565, 409	134, 747	1. 8
Totals .....	707	114, 671, 346	2, 696, 282	2. 4

The following table gives similar information in reference to the national banks which failed prior to the year 1870, to the year 1873, and to the year 1874:

Name and location of bank.	Receiver appointed.	Circulation issued.	Circulation outstanding.	Percentage unredeemed.
First National Bank, Attica, N. Y. ....	Apr. 14, 1865	\$44, 000	\$334	. 74
Venango National Bank, Franklin, Pa. ....	May 1, 1866	85, 000	397	. 47
Merchants' National Bank, Washington, D. C. ....	May 8, 1866	180, 000	1, 226	. 68
First National Bank, Medina, N. Y. ....	Mar. 13, 1867	40, 000	298	. 75
Tennessee National Bank, Memphis, Tenn. ....	Mar. 21, 1867	90, 000	526	. 58
First National Bank, Selma, Ala. ....	Apr. 30, 1867	85, 000	608	. 72
First National Bank, New Orleans, La. ....	May 20, 1867	180, 000	1, 845	1. 03
National Unadilla Bank, Unadilla, N. Y. ....	Aug. 20, 1867	100, 000	386	. 38
Farmers and Citizens' National Bank, Brooklyn, N. Y. ....	Sept. 6, 1867	253, 900	1, 905	. 75
Croton National Bank, New York, N. Y. ....	Oct. 1, 1867	180, 000	729	. 41
First National Bank, Bethel, Conn. ....	Feb. 28, 1868	26, 300	246	. 94
First National Bank, Keokuk, Iowa. ....	Mar. 3, 1868	90, 000	586	. 65
National Bank, Vicksburg, Miss. ....	Apr. 24, 1868	25, 500	151	. 60
First National Bank, Rockford, Ill. ....	Mar. 15, 1869	45, 000	512	1. 12
First National Bank of Nevada, Austin, Nev. ....	Oct. 14, 1869	129, 700	1, 879	1. 45
Totals and average percentage to 1870 .....		1, 554, 400	11, 628	. 75
Ocean National Bank, New York, N. Y. ....	Dec. 13, 1871	800, 000	16, 268	2. 03
Union Square National Bank, New York, N. Y. ....	Dec. 15, 1871	50, 000	689	1. 38
Eighth National Bank, New York, N. Y. ....	Dec. 15, 1871	243, 393	4, 857	2. 00
Fourth National Bank, Philadelphia, Pa. ....	Dec. 20, 1871	179, 000	3, 805	2. 13
Waverly National Bank, Waverly, N. Y. ....	Apr. 23, 1872	71, 000	1, 797	2. 53
First National Bank, Fort Smith, Ark. ....	May 2, 1872	45, 000	860	1. 91
Scandinavian National Bank, Chicago, Ill. ....	Dec. 12, 1872	135, 000	2, 298	1. 70
Wallkill National Bank, Middletown, N. Y. ....	Dec. 31, 1872	118, 900	3, 442	2. 89
Totals and average percentage to 1873 .....		3, 196, 693	45, 644	1. 43
Crescent City National Bank, New Orleans, La. ....	Mar. 18, 1873	450, 000	16, 120	3. 58
Atlantic National Bank, New York, N. Y. ....	Apr. 28, 1873	100, 000	2, 743	2. 74
First National Bank, Washington, D. C. ....	Sept. 19, 1873	450, 000	24, 637	5. 47
National Bank of the Commonwealth, New York, N. Y. ....	Sept. 22, 1873	234, 000	11, 713	5. 01
Merchants' National Bank, Petersburg, Va. ....	Sept. 25, 1873	360, 000	28, 250	7. 85
First National Bank, Petersburg, Va. ....	Sept. 25, 1873	179, 200	13, 790	7. 69
First National Bank, Mansfield, Ohio. ....	Oct. 18, 1873	90, 000	5, 330	5. 92
New Orleans National Banking Association, New Orleans, La. ....	Oct. 23, 1873	360, 000	17, 500	4. 86
First National Bank, Carlisle, Pa. ....	Oct. 24, 1873	45, 000	2, 700	6. 00
First National Bank, Anderson, Ind. ....	Nov. 23, 1873	45, 000	2, 556	5. 68
First National Bank, Topeka, Kans. ....	Dec. 16, 1873	90, 000	6, 466	7. 18
Totals and average percentage to 1874 .....		5, 599, 893	177, 449	3. 17



From this table it will be seen that the highest amount of circulation issued to fifteen national banks which failed previous to 1870 was \$1,554,400, and the amount outstanding on November 1, 1880, was \$11,628, the proportion of notes remaining unredeemed being only 0.75 per cent. of the amount issued. The percentage of notes unredeemed of the same banks on November 1, 1875, was 1.39, in 1876, 1.35, in 1878, 0.86, and in 1880, as has been seen, it is 0.75; showing a rapid increase in the redemption of the notes of these banks. The total amount issued to twenty-three national banks, in which are included the fifteen banks, already mentioned, which failed previous to the year 1873, was \$3,196,693, and the amount outstanding on November 1, 1880, was \$45,644, the proportion of notes remaining unredeemed being but 1.43 per cent. of the amount issued. The total amount outstanding of the notes of these banks has been reduced \$11,430 since November 1, 1878, and the percentage reduced from 1.78 to 1.43. The total amount issued to thirty-four national banks which failed prior to 1874 was \$5,599,893, and the amount outstanding on November 1, 1880, was \$177,449, the proportion of notes unredeemed being 3.17 per cent. of the amount issued.

Of the circulation of fifty-one national banks in voluntary liquidation previous to 1870, amounting to \$5,832,940, there yet remains outstanding \$117,467, or 2.01 per cent. only of the amount issued; of the circulation of seventy-five banks in liquidation prior to 1872, amounting to \$8,648,980, there remains outstanding \$177,075, which is equal to a percentage of 2.05; of a circulation of eighty-nine banks in liquidation prior to 1873, in amount \$10,764,080, there remains outstanding \$232,879, or 2.17 per cent. of the amount issued; and of the circulation of one hundred and five banks in liquidation prior to 1874, in amount \$12,709,100, there remains outstanding \$326,568, or 2.58 per cent. of the amount issued.

The percentage of the fifty-one national banks in voluntary liquidation previous to 1870, which is now 2.01, in 1878 was 2.59; the percentage of seventy-five banks in liquidation prior to 1872, which is now 2.05, in 1878 was 2.63; and the percentage of eighty-nine banks in liquidation prior to 1873 is now 2.17, which in 1878 was 2.82.

These statistics show a rapid reduction during the last two years in the amount of outstanding circulation of banks which have ceased to do business, and they indicate that the final loss upon the notes of national banks will not exceed one or one and a half per cent.

The amount of demand Treasury notes, payable in gold coin, issued from July 17, 1861, to December 31, 1862, was \$60,000,000, in denominations of five, ten, and twenty dollars, and the amount outstanding on November 1 last, was \$60,825, the proportion unredeemed being but little more than one tenth of one per cent.—\$8,882 having been redeemed within the last five years.

The highest outstanding amount of legal-tender notes of the first issue was \$449,479,222, on February 3, 1864. The amount of these notes outstanding on November 1, 1880, was \$14,947,895, or 3.33 per cent. of the highest amount issued. The issues of Treasury notes of the series of 1869 and 1874 have not been as largely reduced. This is accounted for by the fact that large amounts of the legal-tender notes have been held for years by the national banks as reserve, and have not therefore been returned to the Treasury for destruction and replacement by subsequent issues. As the amount of legal-tender notes held by the national banks as reserves has been recently largely displaced by coin, it is probable that the amount of the early issues of these notes will be speedily reduced.

These tables are given somewhat in detail, for the purpose of correcting the belief, very generally entertained, that the proportion of circulating notes outstanding which will ultimately be lost or destroyed is much greater than is shown therein. It is also believed by many that the loss of such notes is a gain to the bank which issues them. The Comptroller receives frequent letters of inquiry upon this subject, and therefore repeats the following paragraph, which was given in a former report:

"Section 5222 of the Revised Statutes requires that all national banks which go into voluntary liquidation shall, within six months thereafter, deposit in the Treasury an amount of lawful money equal to the amount of their circulating notes outstanding. The law also requires that full provision shall be made for the redemption of the circulating notes of any insolvent bank before a dividend is made to its creditors. Thus it will be seen that no association can close up its business without first providing for the payment of all its circulating notes, and that the amount deposited for their redemption must remain in the Treasury until the last outstanding note shall have been presented. It is therefore plain that the government, and not the bank, receives all the benefit arising from lost or unredeemed circulating notes."

#### LOANS AND RATES OF INTEREST OF NEW YORK CITY BANKS.

The following table contains a classification of the loans of the national banks in New York City for the last five years:

Loans and discounts.	October 2, 1876.	October 1, 1877.	October 1, 1878.	October 2, 1879.	October 1, 1880.
	47 banks.	47 banks.	47 banks.	47 banks.	47 banks.
On endorsed paper .....	\$95,510,311	\$92,618,776	\$83,924,333	\$81,520,129	\$107,058,800
On single-name paper .....	16,694,532	15,800,540	17,297,475	22,491,926	27,755,152
On U. S. bonds on demand ....	6,277,492	4,763,448	7,003,085	8,286,525	3,915,077
On other stock, &c., on demand ..	58,749,574	48,376,633	51,152,021	78,082,085	92,630,882
On real-estate security .....	536,803	497,524	786,514	670,021	1,336,518
Payable in gold .....	4,681,570	4,319,014	6,752,181	.....	.....
All other loans .....	1,852,044	2,786,456	2,670,371	4,821,216	2,731,917
Totals .....	184,243,225	169,162,391	169,585,980	195,851,902	238,428,501

The average rate of interest in New York City for each of the fiscal years from 1874 to 1880, as ascertained from data derived from the Journal of Commerce and The Commercial and Financial Chronicle, was as follows:

1874, call loans, 3.8 per cent.; commercial paper, 6.4 per cent.  
 1875, call loans, 3.0 per cent.; commercial paper, 5.6 per cent.  
 1876, call loans, 3.3 per cent.; commercial paper, 5.3 per cent.  
 1877, call loans, 3.0 per cent.; commercial paper, 5.2 per cent.  
 1878, call loans, 4.4 per cent.; commercial paper, 5.1 per cent.  
 1879, call loans, 4.4 per cent.; commercial paper, 4.4 per cent.  
 1880, call loans, 4.9 per cent.; commercial paper, 5.3 per cent.

The average rate of discount of the Bank of England for the same years was as follows:

During the calendar year ending December 31, 1874, 3.69 per cent.  
 During the calendar year ending December 31, 1875, 3.23 per cent.  
 During the calendar year ending December 31, 1876, 2.61 per cent.  
 During the calendar year ending December 31, 1877, 2.91 per cent.  
 During the calendar year ending December 31, 1878, 3.78 per cent.  
 During the calendar year ending December 31, 1879, 2.50 per cent.  
 During the fiscal year ending June 30, 1880, 2.63 per cent.

The rate of interest in the city of New York on November 26 of the present year, as quoted in the Daily Bulletin, was, on call loans, 6 per cent., and on commercial paper of the best grade, from 5 to 5½ per cent.

The rate of interest of the Bank of England on November 29, 1877, was 4 per cent. On January 30, 1878, it was 2 per cent., from which date to October 14, 1878, there were seven changes, and, with a single exception, on May 29, a gradual increase. The rate was fixed at the date last named at 6 per cent., and reduced on November 21, 1878, to 5 per cent., since which time there have been changes in the rate as follows: On January 15, 1879, 4 per cent.; on the 29th of the same month 3 per cent.; on March 12 it was reduced to 2½ per cent., and again on April 9 to 2 per cent., at which rate it remained until November 7, 1879, when it was increased to 3 per cent., which was, also, at that time, the rate of the Bank of France.

On June 17, 1880, the rate of the Bank of England was reduced to 2½ per cent., which is the present rate. The London rate of interest, outside of the Bank of England, was, on October 25, on call loans, 1½ per cent., on three months' time, 1¾, and on six months' time, 2¼; the best bills having actually been placed ¾ per cent. below the rate of the Bank of England.

The rate of discount at the Bank of France, which on October 16, 1878, was raised from 2 per cent. to 3 per cent., was reduced to 2 per cent. on the 23d of May, 1879, and then raised to 3 per cent. on the 23d of the following October. The rate was reduced to 2½ per cent. on April 2, 1880, and advanced on October 14 to 3½ per cent., which is the present rate. The average rate of discount during the year 1879 was 2.58 per cent.

The rate of the Imperial Bank of Germany was reduced from 5½ per cent. to 5 per cent. on October 6, and to 4½ per cent. on October 18 last.

The market discount rates in Berlin, Hamburg and Frankfort, during the month of October, were about 4 per cent.

#### REDEMPTION OF NATIONAL-BANK CURRENCY.

The expense of redeeming the national-bank currency bears oppressively in one respect upon the banks in operation, as they are obliged to pay a proportionate share of the cost of redeeming the notes of associations which are either reducing their circulation, have gone into liquidation, or have become insolvent; the banks continuing business having of course no interest whatever in the circulation thus redeemed.

The Treasury has for a long time had the use of a permanent fund belonging to the assets of banks which are insolvent. It has also a large fund deposited by banks which have gone into voluntary liquidation, or have deposited legal-tender notes for the purpose of reducing their circulation. According to the statement of the Treasurer for November 1 last, the sum of these two funds then amounted to \$20,942,032, the whole of the currency balance at that date being but \$26,846,826. In addition to the use of these funds, which is a great convenience to the Treasury when the currency balance is at a low point, the government, under existing law, receives the whole gain arising from lost or unredeemed notes of the national banks, which gain will ultimately amount to a very large sum—certainly, with no more than the present amount of circulation, to not less than \$3,500,000. Any large national bank in New York City would, on these terms, gladly undertake the redemption of all the notes presented for that purpose at the commercial center—which is the only appropriate place for the redemption

bank notes—without any charge therefor to the banks whose notes are redeemed. It is recommended that the law now in force on this subject be amended, and that the cost of redemption shall be assessed in such manner as that the banks in operation shall pay for the redemption of their own notes only, the remaining cost being borne by the government. Moreover, the government has for fifteen years received annually an average sum of more than three millions of dollars in taxes upon deposits, under a system unknown elsewhere in any country; and it is certainly only just that it should bear the expense of the redemption of those circulating notes from which it alone receives the entire benefit.

Section 3 of the act of June 20, 1874, provides that every national bank “shall, at all times, keep and have on deposit in the Treasury of the United States, in lawful money of the United States, a sum equal to five per centum of its circulation, to be held and used for the redemption of such circulation.” Since the passage of this act the banks have, as a rule, maintained their redemption fund, and their circulating notes have been promptly redeemed at the Treasury without expense to the government.

The following table exhibits the amount of national-bank notes received for redemption monthly, by the Comptroller of the Currency, for the year ending November 1, 1880, and the amount received for the same period at the redemption agency of the Treasury, together with the total amount received since the passage of the act of June 20, 1874:

Months.	Received by Comptroller.				Total.	Received at the redemption agency.
	From national banks for reissue or surrender.	From redemption agency for reissue.	Notes of national banks in liquidation.	Under act of June 20, 1874.		
1879.						
November.....	\$8, 620	\$1, 502, 700	\$75, 510	\$218, 090	\$1, 804, 920	\$3, 251, 634
December.....	10, 725	1, 717, 000	86, 690	144, 492	1, 958, 907	2, 922, 490
1880.						
January.....	9, 620	2, 134, 100	53, 545	338, 142	2, 535, 407	5, 641, 102
February.....	50, 240	2, 478, 500	189, 846	388, 009	3, 106, 595	3, 960, 505
March .....	18, 160	2, 322, 500	88, 735	322, 485	2, 751, 880	3, 144, 811
April.....	31, 300	2, 057, 200	105, 234	429, 576	2, 623, 310	4, 006, 205
May.....	17, 630	3, 654, 000	151, 877	711, 987	4, 535, 494	7, 554, 666
June .....	22, 300	4, 435, 600	276, 699	962, 267	5, 696, 866	7, 808, 361
July .....	25, 460	2, 732, 400	70, 697	500, 614	3, 329, 081	4, 709, 894
August .....	14, 915	2, 522, 500	129, 790	302, 742	2, 969, 947	3, 469, 884
September .....	24, 800	2, 461, 000	90, 630	541, 528	3, 117, 958	3, 348, 638
October .....	10, 200	2, 406, 800	.....	149, 153	2, 566, 153	3, 708, 448
Total.....	243, 970	30, 424, 300	1, 319, 163	5, 009, 085	36, 996, 518	53, 526, 722
Received from June 20, 1874, to October 31, 1879 .....	12, 423, 225	356, 880, 855	14, 749, 912	66, 336, 423	450, 399, 415	984, 486, 292
Grand total.....	12, 667, 195	387, 314, 155	16, 069, 075	71, 345, 508	487, 395, 933	1,038,013,014

From the passage of the act of June 20, 1874, to November 1, 1880, there was received at the redemption agency of the Treasury \$1,038,013,014 of national-bank currency. The receipts reached the highest point during the year ending November 1, 1877, when they amounted to \$229,308,507, since which date they have steadily decreased; being for the year 1878, \$202,499,740, for 1879, \$117,191,999, and for 1880, but \$53,526,722.

At this Office, the maximum yearly receipts of currency for redemption was reached during the year ending November 1, 1875, when the amount

was \$140,577,505. There has been a decrease in each succeeding year, but the percentage has been much less as compared with the decrease at the redemption agency.

During the year ending November 1, 1880, there was received at the redemption agency of the Treasury \$53,526,000 of national-bank notes, of which amount, \$24,312,000, or about 45 per cent., was received from the banks in New York City, and \$5,682,000, or about 10 per cent., from Boston. The amount received from Philadelphia was \$3,531,000; from Baltimore, \$499,000; Pittsburgh, \$597,000; Cincinnati, \$864,000; Chicago, \$1,937,000; Saint Louis, \$446,000; Providence, \$1,229,000. The amount of circulating notes fit for circulation returned by the agency to the banks of issue during the year was \$15,010,700. The total amount received by the Comptroller for destruction, from the redemption agency and from the national banks direct, was \$35,677,355. Of this amount, \$2,966,700 were issues of banks in the city of New York; \$3,088,611, of Boston; \$1,398,800, of Philadelphia; \$1,207,489, of Providence; \$556,550, of Baltimore; \$661,738, of Pittsburgh; and of each of the other principal cities less than \$500,000.

The following table exhibits the number and amount of national-bank notes, of each denomination, which have been issued and redeemed since the organization of the system, and the number and amount outstanding on November 1, 1880:

Denominations	Number.			Amount.		
	Issued.	Redeemed.	Outstanding.	Issued.	Redeemed.	Outstanding.
Ones .....	23, 167, 677	20, 875, 215	2, 202, 462	\$23, 167, 677	\$20, 875, 215	\$2, 292, 462
Twos .....	7, 747, 510	7, 143, 889	603, 630	15, 495, 038	14, 287, 778	1, 207, 260
Fives .....	69, 131, 976	49, 149, 824	19, 982, 152	345, 659, 880	245, 749, 120	99, 910, 760
Tens .....	27, 203, 168	15, 821, 110	11, 382, 058	272, 031, 680	158, 211, 100	113, 820, 580
Twenties .....	8, 266, 398	4, 484, 820	3, 781, 578	165, 327, 080	89, 606, 400	75, 631, 560
Fifties .....	1, 253, 865	825, 490	428, 366	62, 693, 250	41, 274, 950	21, 418, 300
One hundreds .....	879, 490	610, 601	268, 889	87, 049, 000	61, 060, 100	26, 888, 900
Five hundreds .....	20, 763	19, 484	1, 279	10, 381, 500	9, 742, 000	639, 500
One thousands .....	6, 363	6, 124	239	6, 363, 000	6, 124, 000	239, 000
					*-15, 129	*+15, 129
<b>Total .....</b>	<b>137, 677, 219</b>	<b>98, 936, 566</b>	<b>38, 740, 653</b>	<b>989, 068, 985</b>	<b>647, 005, 534</b>	<b>342, 063, 451</b>

\* Portions of notes lost or destroyed.

A table showing the number and denominations of the national-bank notes issued and redeemed, and the number of each denomination outstanding on November 1, for the last twelve years, will be found in the appendix.

The following table shows the amount of national-bank notes received at this Office and destroyed yearly, since the establishment of the system:

Prior to November 1, 1865 .....	\$175, 490
During the year ending October 31, 1866 .....	1, 050, 382
During the year ending October 31, 1867 .....	3, 401, 423
During the year ending October 31, 1868 .....	4, 602, 825
During the year ending October 31, 1869 .....	8, 603, 729
During the year ending October 31, 1870 .....	14, 305, 689
During the year ending October 31, 1871 .....	24, 344, 047
During the year ending October 31, 1872 .....	30, 211, 720
During the year ending October 31, 1873 .....	36, 433, 171
During the year ending October 31, 1874 .....	49, 939, 741
During the year ending October 31, 1875 .....	137, 697, 606
During the year ending October 31, 1876 .....	98, 672, 716
During the year ending October 31, 1877 .....	76, 918, 963
During the year ending October 31, 1878 .....	57, 381, 249
During the year ending October 31, 1879 .....	41, 101, 830
During the year ending October 31, 1880 .....	35, 539, 600
Additional amount destroyed of notes of banks in liquidation .....	26, 696, 662
<b>Total .....</b>	<b>647, 076, 993</b>



## NATIONAL BANK FAILURES.

Three banks have failed during the year ending November 1, 1880, and have been placed in the hands of receivers, as follows:

	Capital.
First National Bank of Meadville, Pa.....	\$100,000
First National Bank of Newark, N. J.....	300,000
First National Bank of Brattleboro', Vt.....	300,000

The Manufacturers' National Bank of Chicago, Ill., which went into voluntary liquidation on September 25, 1873, has been placed in the hands of a receiver for the purpose of enforcing the individual liability of shareholders.

Dividends have been paid to the creditors of these banks during the present year, as follows:

	Per cent.
First National Bank of Meadville, Pa.....	65
First National Bank of Newark, N. J.....	80
First National Bank of Brattleboro', Vt.....	90

The aggregate amount of these dividends is \$580,656.70, and their average per cent. to claims proved is 77.4.

Dividends have also been paid to the creditors of banks which had failed prior to November 1, 1879, as follows:

Atlantic National Bank, New York, N. Y.....	5 per cent. ; total, 95 per cent.
New Orleans National Banking Association, New Orleans, La.....	5 per cent. ; total, 55 per cent.
Charlottesville National Bank, Charlottesville, Va....	10 per cent. ; total, 50 per cent.
First National Bank, Duluth, Minn.,.....	28 per cent. ; total, 100 per cent.
First National Bank, La Crosse, Wis.....	10 per cent. ; total, 45 per cent.
First National Bank, Wichita, Kans.....	10 per cent. ; total, 70 per cent.
National Bank of Fishkill, N. Y.....	30 per cent. ; total, 85 per cent.
First National Bank, Franklin, Ind.....	25 per cent. ; total, 90 per cent.
Northumberland County National Bank, Shamokin, Pa.....	12½ per cent. ; total, 75 per cent.
National Exchange Bank, Minneapolis, Minn.....	13⅞ per cent. ; total, 88⅞ per cent.
National Bank of the State of Missouri, Saint Louis, Mo.....	20 per cent. ; total, 90 per cent.
First National Bank, Georgetown, Colo.....	10 per cent. ; total, 22½ per cent.
Lock Haven National Bank, Lock Haven, Pa.....	20 per cent. ; total, 80 per cent.
Central National Bank, Chicago, Ill.....	5 per cent. ; total, 60 per cent.
First National Bank, Kansas City, Mo.....	10 per cent. ; total, 40 per cent.
First National Bank, Tarrytown, N. Y.....	5 per cent. ; total, 85 per cent.
First National Bank, Dallas, Tex.....	27 per cent. ; total, 37 per cent.
First National Bank, Bozeman, Mon.....	30 per cent. ; total, 70 per cent.
Merchants' National Bank, Fort Scott, Kans.....	30 per cent. ; total, 45 per cent.
First National Bank, Warrensburg, Mo.....	65 per cent. ; total, 75 per cent.
German American National Bank, Washington, D. C.....	10 per cent. ; total, 20 per cent.
German National Bank, Chicago, Ill.....	30 per cent. ; total, 55 per cent.
Commercial National Bank, Saratoga Springs, N. Y....	25 per cent. ; total, 85 per cent.
National Bank of Poultney, Vt.....	35 per cent. ; total, 60 per cent.
First National Bank, Monticello, Ind.....	30 per cent. ; total, 30 per cent.
First National Bank, Butler, Pa.....	15 per cent. ; total, 30 per cent.

The total amount of dividends paid by the Comptroller to creditors of insolvent national banks during the year ending November 1, 1880, was \$1,712,731.16. The total dividends paid since the organization of the system is \$17,632,639, upon proved claims amounting to \$25,786,261. The dividends paid equal 68.4 per cent. of the amount of the claims.

Assessments amounting to \$7,176,750 have been made upon the shareholders of insolvent banks, for the purpose of enforcing their individual liability, of which amount \$2,617,571 has been collected in all, and \$801,563 of it during the past year.

A table showing the national banks which have been placed in the hands of receivers, the amount of their capital, and of claims proved,



and the rates of dividends paid, and also one showing the amount of circulation of such banks, issued, redeemed, and outstanding, will be found in the appendix.

In the case of the Ocean National Bank of New York, there are dividend checks amounting to \$4,189.70 which have never been called for by the creditors, although every effort has been made to find them. Small amounts are also held belonging to creditors of other national banks which are insolvent, and the Comptroller respectfully recommends the passage of a bill, authorizing him to divide these balances among the other creditors at the time of the final closing of such banks.

## RESERVE.

The following table exhibits the amount of net deposits, and the reserve required thereon by the act of June 20, 1874, together with the amount and classification of reserve held by the national banks in New York City, in the other reserve cities, and by the remaining banks, at the dates of their reports in October of each year from 1875 to 1880:

## NEW YORK CITY.

	Num- ber of banks	Net de- posits.	Reserve required.	Reserve held.		Classification of reserve.			
				Amount.	Ratio to deposits.	Specie.	Other law- ful money.	Due from agents.	Redemp- tion fund.
		<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Per cent.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>	<i>Millions.</i>
October 1, 1875.	48	202.3	50.6	60.5	29.9	5.0	54.4	.....	1.1
October 2, 1876.	47	197.9	49.5	60.7	30.7	14.6	45.3	.....	0.8
October 1, 1877.	47	174.9	43.7	48.1	27.5	13.0	34.3	.....	0.8
October 1, 1878.	47	189.8	47.4	50.9	26.8	12.2	36.5	.....	1.1
October 2, 1879.	47	210.2	52.6	53.1	25.3	19.4	32.6	.....	1.1
October 1, 1880.	47	268.1	67.0	70.6	26.4	58.7	11.0	.....	0.9

## OTHER RESERVE CITIES.

October 1, 1875.	188	223.9	56.0	74.5	33.3	1.5	37.1	32.3	3.6
October 2, 1876.	189	217.0	54.2	76.1	35.1	4.0	37.1	32.0	3.0
October 1, 1877.	188	204.1	51.0	67.3	33.0	5.6	34.3	24.4	3.0
October 1, 1878.	184	199.9	50.0	71.1	35.6	9.4	29.4	29.1	3.2
October 2, 1879.	181	228.8	57.2	83.5	36.5	11.3	33.0	35.7	3.5
October 1, 1880.	184	289.4	72.4	105.2	36.3	28.3	25.0	48.2	3.7

## STATES AND TERRITORIES.

October 1, 1875.	1,851	307.9	46.3	100.1	32.5	1.6	23.7	53.3	11.5
October 2, 1876.	1,853	291.7	43.8	99.9	34.3	2.7	31.0	55.4	10.8
October 1, 1877.	1,845	290.1	43.6	95.4	32.9	4.2	31.6	48.9	10.7
October 1, 1878.	1,823	289.1	43.4	106.1	36.7	8.0	31.1	56.0	11.0
October 2, 1879.	1,820	329.9	49.5	124.3	37.7	11.5	30.3	71.3	11.2
October 1, 1880.	1,850	410.5	61.6	147.2	35.8	21.2	28.8	86.4	11.2

## SUMMARY.

October 1, 1875.	2,087	734.1	152.2	235.1	32.0	8.1	125.2	85.6	16.2
October 2, 1876.	2,089	706.6	147.5	236.7	33.5	21.3	113.4	87.4	14.6
October 1, 1877.	2,080	669.1	138.8	210.8	31.5	22.8	100.2	73.3	14.5
October 1, 1878.	2,053	678.8	140.8	228.1	33.6	30.7	97.0	85.1	15.3
October 2, 1879.	2,048	768.9	159.3	260.9	33.9	42.2	95.9	107.0	15.8
October 1, 1880.	2,090	968.0	201.0	323.0	33.4	108.2	64.3	134.6	15.9

A table showing the average weekly deposits, circulation and reserve of the national banks in New York City, in September and October of each year since 1873, will be found in the appendix.

The following table, compiled from returns made to the Clearing House by the national banks in New York City, exhibits the movement of their reserve, weekly, during October, for the last eight years:

Week ending—	Specie.	Legal-tenders.	Total.	Ratio of reserve to—	
				Circulation and deposits.	Deposits.
				Per cent.	Per cent.
October 4, 1873.....	\$9, 240, 300	\$9, 251, 900	\$18, 492, 200	11. 6	14. 0
October 11, 1873.....	10, 506, 900	8, 049, 300	18, 556, 200	11. 6	14. 1
October 18, 1873.....	11, 650, 100	5, 179, 800	16, 829, 900	10. 7	13. 0
October 25, 1873.....	11, 433, 500	7, 187, 300	18, 620, 800	12. 2	14. 8
October 3, 1874.....	15, 373, 400	53, 297, 600	68, 671, 000	30. 0	33. 9
October 10, 1874.....	14, 517, 700	52, 152, 000	66, 669, 700	29. 6	33. 3
October 17, 1874.....	12, 691, 400	51, 855, 100	64, 546, 500	29. 0	32. 7
October 24, 1874.....	11, 457, 900	49, 893, 900	61, 351, 800	28. 8	31. 7
October 31, 1874.....	10, 324, 900	50, 773, 000	61, 097, 900	27. 9	31. 6
October 2, 1875.....	5, 438, 900	56, 181, 500	61, 620, 400	28. 1	30. 6
October 9, 1875.....	5, 716, 200	51, 342, 300	57, 058, 500	26. 5	28. 9
October 16, 1875.....	5, 528, 500	48, 582, 700	54, 111, 200	25. 4	27. 7
October 23, 1875.....	5, 735, 000	47, 300, 900	53, 035, 900	25. 3	27. 7
October 30, 1875.....	8, 975, 600	45, 762, 800	54, 738, 400	26. 5	29. 0
October 7, 1876.....	17, 682, 600	45, 535, 600	63, 218, 200	30. 5	32. 4
October 14, 1876.....	16, 233, 600	43, 004, 600	59, 238, 200	28. 8	31. 1
October 21, 1876.....	15, 577, 500	41, 421, 700	56, 999, 200	27. 8	30. 0
October 28, 1876.....	14, 011, 600	41, 645, 600	55, 657, 200	28. 0	30. 3
October 6, 1877.....	14, 665, 600	36, 168, 300	50, 833, 900	27. 0	29. 5
October 13, 1877.....	14, 726, 500	35, 178, 900	49, 905, 400	26. 7	29. 2
October 20, 1877.....	14, 087, 400	35, 101, 700	49, 189, 100	26. 5	29. 0
October 27, 1877.....	15, 209, 000	34, 367, 800	49, 576, 800	26. 8	29. 4
October 5, 1878.....	14, 995, 800	38, 304, 900	53, 300, 700	25. 7	28. 4
October 12, 1878.....	12, 184, 600	37, 685, 100	49, 869, 700	24. 4	27. 0
October 19, 1878.....	13, 531, 400	36, 576, 000	50, 107, 400	24. 7	27. 3
October 26, 1878.....	17, 384, 200	35, 690, 500	53, 074, 700	25. 8	28. 5
October 4, 1879.....	18, 979, 600	34, 368, 000	53, 347, 600	23. 3	25. 8
October 11, 1879.....	20, 901, 800	32, 820, 300	53, 722, 100	23. 4	25. 9
October 18, 1879.....	24, 686, 500	29, 305, 200	53, 991, 700	23. 5	26. 1
October 25, 1879.....	25, 636, 000	26, 713, 900	52, 349, 900	23. 0	25. 5
October 2, 1880.....	59, 823, 700	11, 129, 100	70, 952, 800	25. 4	26. 4
October 9, 1880.....	62, 521, 300	10, 785, 000	73, 306, 300	25. 4	27. 2
October 16, 1880.....	62, 760, 600	10, 939, 200	73, 699, 800	25. 5	27. 1
October 23, 1880.....	60, 888, 200	10, 988, 200	71, 876, 400	24. 9	26. 6
October 30, 1880.....	61, 471, 600	10, 925, 000	72, 396, 600	25. 0	26. 7

APPENDIX.\*

Tables will be found in the appendix, exhibiting the reserve of the national banks as shown by their reports, from October 2, 1874, to October 1, 1880; the reserve by States and principal cities for October 1, 1880; and in the States and Territories, in New York City, and in the other reserve cities, separately, at three dates in each year, from 1877 to 1880.

Special attention is called to the synopsis of judicial decisions contained in the appendix, to the numerous and carefully prepared tables in both report and appendix, and to the index of subjects and list of tables to be found at the close of the appendix. At the end of the full volume of more than seven hundred pages is an alphabetical list of the cities and villages in which the national banks are situated.

In concluding this report the Comptroller performs a pleasant duty in acknowledging the zeal and efficiency of the officers and clerks associated with him in the discharge of official duties.

JOHN JAY KNOX,  
*Comptroller of the Currency.*

Hon. SAMUEL J. RANDALL,  
*Speaker of the House of Representatives.*

\* The appendix, which is omitted for want of space, may be found in the bound volume of the Comptroller's report.

## REPORT OF THE DIRECTOR OF THE MINT.

TREASURY DEPARTMENT,  
BUREAU OF THE MINT,  
November 23, 1880.

SIR: I have the honor to submit the following report of the operations of the mints and assay offices of the United States for the fiscal year ended June 30, 1880, being my second and the eighth annual report of the Director since the organization of the Bureau of the Mint:

## DEPOSITS AND PURCHASES.

The deposits of gold and silver bullion at the mints and assay offices, including deliveries upon purchases for silver coinage, have been in number and value far greater than in any previous year since the establishment of the Mint. Of gold, besides the deposit of \$35,821,705.40 of domestic production, and \$1,385,834.59 of plate, jewelry, and worn coin, \$61,627,556.86 of foreign coin and bullion, out of a total import of \$62,550,837, was brought to the mints and assay offices during the year, and its value paid to depositors in gold coin and bars.

The aggregate of the gold deposits was \$98,835,096.85, and exceeded by \$29,750,567.11 the amount of gold deposited at the mints and assay offices in 1861, which was the greatest amount received in any previous year.

The total deposits of silver, including deliveries upon purchases, were in excess of those of the previous year, and only surpassed during the coinage of fractional silver and trade dollars in 1877 and 1878.

The total deposits and purchases of silver bullion were, of domestic bullion \$32,132,756.95, foreign coin and bullion \$2,219,105.83, plate, jewelry and American coin \$288,660.01, a total of \$34,640,522.79.

The forms in which the above amounts were brought to the mints and assay offices were as follows:

	Gold.	Silver.	Total.
Domestic production .....	\$35,821,705 40	\$32,132,756 95	\$67,954,462 35
United States coin .....	209,328 82	39,298 28	248,627 10
Foreign bullion .....	21,200,907 23	1,154,359 57	22,355,356 80
Foreign coin .....	40,428,559 63	1,064,746 26	41,493,305 89
Old jewelry, plate, and jewelers' bars .....	1,176,505 77	249,361 73	1,425,867 50
<b>Total .....</b>	<b>98,835,096 85</b>	<b>34,640,522 79</b>	<b>133,475,619 64</b>

In addition to the above net amount of deposits, bars amounting to \$36,141,366.83 in gold, and \$2,574,235.35 in silver, made at one institution were subsequently received and operated upon at another, making the total amounts received and worked \$134,976,463.68 in gold and \$37,214,758.14 in silver.

These amounts were distributed among the mints and assay offices as follows:

Mint or assay office.	Gold.	Silver.	Total.
Philadelphia .....	\$36,637,651 39	\$16,671,599 21	\$53,309,250 60
San Francisco .....	28,545,544 46	10,842,390 58	39,387,935 04
Carson .....	308,174 51	622,291 88	990,466 39
Denver .....	344,909 86	4,443 77	349,353 63
New Orleans .....	97,620 40	4,502,275 24	4,599,895 64
New York .....	68,273,627 74	4,508,067 20	72,781,694 94
Beise .....	147,619 16	2,052 83	149,671 99
Helena .....	473,532 96	61,068 23	534,601 19
Charlotte .....	87,783 20	569 20	88,352 40
<b>Total .....</b>	<b>134,976,463 68</b>	<b>37,214,758 14</b>	<b>172,191,221 82</b>

## COINAGE.

The unusual imports of foreign gold coin and bullion brought to the New York assay office and mints during the first half of the last fiscal year gold bullion beyond the capacity of the mints for immediate coinage. Fortunately the condition of the Treasury and slight demand for coin in redemption of government obligations did not require the immediate conversion of this bullion into coin.

It was deemed advisable to increase the work at the Philadelphia Mint to a monthly coinage, besides the coinage of silver and minor coins, of from \$3,000,000 to \$5,000,000 of gold. This Mint was able with existing facilities, and the employment of additional labor, to coin during the year \$27,639,445 of gold, leaving at the close \$38,468,874 of gold bullion in that Mint and the New York assay office uncoined.

For the first time a successful effort has been made to obtain a large portion of the coinage of gold pieces in denominations less than twenty dollars. To do this has required positive instructions from this office, in accordance with your views. As was said by James Ross Snowden, Director of the Mint in 1860, "The chief design of a national mint is to subserve the interests of the people at large, preferably to a few large owners of bullion or coin. The interests of the public and of depositors are not always concurrent in the matter under discussion. Depositors of large amounts call for coin in a form which gives the least trouble to count; and banking institutions, in addition to that, may prefer it in a form not likely to be drawn out. Many who present their checks at these institutions would doubtless ask for specie, but are deterred from doing so by the expectation of receiving double eagles, instead of half or quarter eagles. In a word, the plain effect of issuing gold coin of a large size is to keep down the circulation of specie and increase the use of paper money."

In Great Britain the gold coinage consists almost wholly of sovereigns and half-sovereigns; in France, of twenty and ten franc pieces; and in Germany, of ten-mark pieces, all of these coins being of less value than five dollars. The absorption by France of \$1,100,000,000 of gold imports into her circulation during the thirty years, from 1850 to 1880, may in part be accounted for by the coinage of nearly all this gold into denominations of less than two and four dollars' value.

Let the people have gold and silver coins for their use, and for the ordinary and smaller business transactions, and the best secured redeemable paper circulation for the larger transactions of trade and commerce.

While the law gives the depositor the option into what denominations his bullion shall be coined, if, in lieu of waiting for such coins to be struck, he asserts his right to be paid the value out of the bullion funds kept by the Secretary of the Treasury at the Mint for such payment, he must take such funds and denominations as are lawfully provided, and loses all claim to the bullion he has deposited or power to control its future disposition. However, while asserting the right to direct the coinage of gold belonging to the United States, as seemed to be for the interests of the community, the wishes and conveniences of depositors and those using large sums of money in their transactions have not been overlooked, and a limited coinage of double eagles has been permitted.

The total coinage during the year amounted to \$84,370,144, of which \$56,157,735 was gold, \$27,942,437.50 silver, and \$269,971.50 minor coins. The number of pieces of each denomination struck, were as follows, viz, of double eagles, 1,075,768; eagles, 1,883,632; half eagles,

3,158,172; three dollars, 3,030; quarter eagles, 1,230; gold dollars, 3,030; standard silver dollars, 27,933,750; half-dollars, 6,550; quarter dollars, 15,350; dimes, 15,750, five cents, 24,950; three cents, 32,750; and cents, 26,774,150; a total number of pieces of 60,928,112.

Notwithstanding the large number of cents struck, the demand for this denomination of coin has been so great that the Mint at Philadelphia—the only mint at which minor coins are struck—has been unable to manufacture a sufficient supply to promptly fill the orders received, although the bronze alloy has been purchased in the form of manufactured blanks or planchets ready for striking, and thus greatly lessened the amount of labor required.

The coinage of the last three calendar years has been:

	1877.	1878.	1879.
Gold .....	\$43,999,864 00	\$49,786,653 00	\$39,080,000 00
Silver .....	28,393,045 50	28,518,850 00	27,568,235 00
Minor .....	8,525 00	58,186 50	165,008 00
Total.....	72,401,434 50	78,363,689 50	66,813,243 00

Detailed statements of the coinage executed are presented in the appendix.

#### BARS.

During the year the mints and assay offices manufactured bars to the amount of \$69,949,778.05 in gold and \$6,924,501.17 in silver.

Of the gold bars, \$57,368,761.15 were made at the New York assay office for transmission to the Mint at Philadelphia for coinage, \$11,524,181.83 were fine bars, and \$1,056,835.07 were unparted.

Of the silver bars made, \$6,811,645.76 were fine, \$24,347.93 sterling, and \$88,507.48 unparted.

#### PARTING AND REFINING.

The refineries of the coinage mints and of the assay office at New York operated upon 10,537,106.42 ounces gross of bullion, and separated therefrom 1,241,137.981 ounces of standard gold and 8,577,111.12 ounces of standard silver.

The following statement shows in detail the quantities and value of gold and silver operated upon at the respective refineries during the year.

#### OUNCES.

Mint or assay office.	Gross.	Standard gold.	Standard silver.
Philadelphia .....	130,879.38	78,414.164	51,907.97
San Francisco .....	6,072,432.80	524,229.418	4,887,291.16
Carson .....	418,912.65	18,998.200	428,841.57
New Orleans .....	3,227.59	1,844.139	827.42
New York.....	3,911,654.00	617,652.000	3,208,253.00
Total.....	10,537,106.42	1,241,137.981	8,577,111.12

#### VALUE.

Mint or assay office.	Gold.	Silver.	Total.
Philadelphia .....	\$1,458,868 16	\$60,390 36	\$1,519,258 52
San Francisco .....	9,753,105 45	5,687,029 71	15,440,135 16
Carson .....	353,456 00	499,015 64	852,471 64
New Orleans .....	34,300 36	962 81	35,272 37
New York.....	11,491,200 00	3,733,239 85	15,224,439 85
Total.....	23,090,939 17	9,980,638 37	33,071,577 54



## DIES AND MEDALS.

The engraving department of the mint at Philadelphia prepared during the year 1,092 coinage and medal dies. The number of medals struck was 1,347, of which 43 were in gold, 446 in silver, and 858 in bronze. A medal of fine gold was prepared for presentation to Bendix Koppel in recognition of his services as arbitrator in the "Montijo" arbitration. Fourteen medals of fine gold and three of fine silver were made for award to various persons who had exhibited special heroism in saving life from the perils of the sea.

## PURCHASES OF SILVER BULLION.

Purchases of silver bullion for delivery at the mints at Philadelphia, San Francisco, Carson, and New Orleans have been made in the manner described in the last annual report, with the exception that the day for receiving offers was changed January 3, 1880, from Wednesday, three o'clock p. m., to Thursday, two o'clock p. m.

The superior facilities at San Francisco for filling with dispatch orders for speedy delivery of silver bullion in China, and the diminished production of silver in the States and Territories contiguous to the Pacific coast, have frequently operated to carry the price of silver bullion at San Francisco above the prices at New York and London, and to render it difficult at times to purchase at market rates silver bullion for delivery at the Pacific Coast Mints. During the year the department was able to procure for those mints bullion only sufficient to coin 8,318,000 standard silver dollars. This inability compelled the suspension of coinage at the Carson Mint from November 1, 1879, to May 1, 1880, the stock of silver bullion at the former date having become reduced to 12,342.41 standard ounces. The purchase and reception of silver bullion was, however, in the mean time continued, and a stock accumulated by the 16th of April, 1880, of 227,087.54 standard ounces. This amount, with the prospect of additional supplies, justified the resumption of coinage, but the whole amount of silver bullion obtained for the Carson Mint during the year amounted at its coining value to \$597,624.28 only.

In preference to purchasing bullion for delivery at the New Orleans Mint at figures regarded as in excess of the market price, it was at first deemed advisable to transfer from the New York assay office 1,798,167.82 standard ounces purchased prior to June 30, 1879. This was insufficient to supply that mint with an amount of bullion equal to its capacity and the demand upon it for silver coinage; it therefore became necessary to purchase additional bullion at such rates as were offered or to suspend coinage at that mint.

The rates, though at first above the New York price, were less than the cost to the department to purchase and transfer from Philadelphia or New York. Offers were accepted during the year for the delivery at New Orleans of 1,684,158 standard ounces at the lowest rates attainable, but above the New York price.

Treasury and public demands for coin in exchange for the heavy importation of foreign gold, and the urgent and increasing demand for one cent bronze coins, rendered it impossible to increase the coinage of standard silver dollars at the Philadelphia Mint. It was also found more advantageous to purchase and coin silver bullion at New Orleans than at San Francisco, as the resulting coin could be far more rapidly and economically distributed from the former than the latter. No difficulty was experienced in procuring at market rates during the year all



the silver bullion necessary for the Philadelphia Mint. At no time during the year was that institution without an ample stock of bullion.

The purchases during the year, as will be seen from the accompanying table, were 24,069,134.02 standard ounces, at a cost of \$24,778,724.45, while the silver parted from gold deposits and purchased in pursuance of section 3527, Revised Statutes, at a price fixed by the Director of the Mint, and which during the year was \$1. per standard ounce, amounted to 193,437.36 standard ounces, costing \$193,437.36, making the total quantity purchased 24,262,571.38 standard ounces, at a cost of \$24,972,161.81, and an average per month of \$2,081,013.48 worth of bullion.

The average London price of silver during the year was 52 $\frac{7}{8}$  pence, with exchange at par (\$4.8665) equivalent to \$1.14436 per ounce fine, and at the average monthly price at New York, of exchange on London, \$4.8634, equivalent to \$1.14397 per ounce fine. The average New York price of silver during the year was \$1.14162 per ounce fine.

## SILVER PURCHASES, 1880.

Mint or assay office at which delivered.	Purchases.		Partings purchased.		Total purchased.	
	Standard ounces.	Cost.	Standard ounces.	Cost.	Standard ounces.	Cost.
Philadelphia.....	14, 224, 005 64	\$14, 614, 490 49	20, 254 78	\$20, 254 78	14, 244, 260 42	\$14, 634, 745 27
San Francisco .....	7, 264, 591 05	7, 499, 069 11	67, 261 95	67, 261 95	7, 331, 853 00	7, 566, 331 06
New Orleans.....	2, 070, 351 88	2, 141, 329 00	623 08	623 08	2, 070, 974 96	2, 141, 952 08
Carson City.....	510, 185 45	523, 835 85	3, 397 93	3, 397 93	513, 583 38	527, 233 78
New York.....			101, 899 62	101, 899 62	101, 899 62	101, 899 62
Total .....	24, 069, 134 02	24, 778, 724 45	193, 437 36	193, 437 36	24, 262, 571 38	24, 972, 161 81

## DISTRIBUTION OF SILVER DOLLARS.

On the first of July, 1879, the amount of standard silver dollars in circulation was 7,653,649, and on the first of July, 1880, 19,309,435, showing an increase in the circulation during the year of 11,645,786.

Up to November 1, 1880, there had been coined 72,847,750 standard silver dollars, of which 19,780,241 were held by the Treasury for the redemption of silver-certificates and \$27,304,218 for distribution, \$12,918,505 of the latter being in the mints, making the total amount in the Treasury \$47,084,459, and in circulation \$25,763,291, an increase of \$6,453,856 in the circulation from July 1 to November 1, 1880.

The authority for the issue and distribution of standard silver dollars at the mints other than in payment for purchases of silver bullion, and other expenses is contained in the coinage act of 1873, and the act of February 28, 1878, providing for the coinage of the standard silver dollar.

Section 28 of the coinage act of 1873 provides "that silver coins other than the trade dollar shall be paid out at the several mints and the assay office in New York City, in exchange for gold coins at par, in sums not less than one hundred dollars; and it shall be lawful, also, to transmit parcels of the same, from time to time, to the assistant treasurers, depositaries, and other officers of the United States, under general regulations proposed by the Director of the Mint and approved by the Secretary of the Treasury."

Under the provisions of these acts the issue and paying out of silver dollars has been effected.

First. By payment in standard silver dollars for all silver bullion purchased for coinage and delivered at the mints during the year, amounting to \$24,972,161.81.

Second. By exchange for gold coin.

Third. Under general regulations prescribed by the Director of the Mint, and approved by the Secretary of the Treasury September 3, 1878, directing that the superintendents of the coinage mints “upon the receipt of a written request of the Treasurer of the United States, forward by express standard silver dollars in the sum of one thousand dollars, or a multiple thereof, to such party or parties as he may designate. The expense of transportation to be paid by the mint from the silver profit fund.”

Section 27 of the coinage act of 1873 provides that the expense of distributing the subsidiary silver coins shall be paid from the silver profit fund. In the act directing the coinage of the standard silver dollar the gain arising from such coinage is required to be accounted for and paid into the Treasury as provided under existing laws relative to the subsidiary coinage.

Under these provisions and the regulation referred to, standard silver dollars are transported from the mints not only to assistant treasurers, depositaries, and other officers of the United States, but to such point as the Treasurer of the United States may designate, and the expense is charged to the silver profit fund.

If there is any doubt as to this construction of the law, or of the propriety of such method of distribution, and the payment of expenses thereof, I respectfully suggest that additional legislation be requested conferring any needed authority, or more specifically defining the proper cases for its application.

Section 28 of the coinage act of 1873 provides that the subsidiary silver coins shall only be paid out at the mints in sums of not less than \$100 at par in exchange for gold coins.

The propriety of limiting such exchange to gold coin at the present time is not apparent, and if any exchange for United States notes is not authorized I respectfully suggest that the existing laws ought to be amended.

I append herewith a table exhibiting the movement, circulation, and coinage of standard silver dollars on July 1, 1878, and each six months thereafter to July 1, 1880, and for the four months ending November 1, 1880, as shown by the books of this office and the Treasurer's monthly statement of assets and liabilities:

COMPARATIVE STATEMENT of the MOVEMENT, CIRCULATION, and COIN-AGE of STANDARD SILVER DOLLARS at the end of each six months, from July 1, 1878, to July 1, 1880, and for the four months ending November 1, 1880.

Period.	In the Treasury.			In circula- tion.	Total coin- age.
	Held for pay- ment of cer- tificates out- standing.	For distri- bution.	Total.		
July 1, 1878 .....	\$7, 080	\$5, 273, 904	\$5, 281, 044	\$3, 292, 456	\$8, 573, 500
January 1, 1879 .....	413, 360	16, 283, 070	16, 697, 330	5, 798, 220	22, 495, 550
July 1, 1879 .....	412, 480	27, 733, 871	28, 147, 351	7, 653, 049	35, 801, 000
January 1, 1880 .....	3, 824, 252	29, 343, 812	33, 168, 064	16, 887, 586	50, 055, 650
July 1, 1880 .....	5, 789, 509	38, 635, 746	44, 425, 315	19, 309, 435	63, 734, 750
November 1, 1880 .....	19, 780, 241	27, 304, 218	47, 084, 459	25, 763, 291	72, 847, 750

APPROPRIATIONS, EARNINGS, AND EXPENDITURES.

The amount appropriated for the support of the respective mints and assay offices during the fiscal year ended June 30, 1880, was \$1,228,800, out of which the sum of \$1,085,482.91 was expended. In addition the

sum of \$92,033.46 was expended on account of the mints, and \$13,558.62 at the Treasury Department, a total of \$105,592.06 from the appropriation contained in the act of February 28, 1878, authorizing the coinage of the standard silver dollar.

The use of this appropriation to meet the expenditures at the Philadelphia and New Orleans mints became necessary on account of the large coinage of standard silver dollars executed at those mints, which unavoidably carried the expenses above the specific appropriations for their support. This, however, was offset by reduced expenses resulting from correspondingly diminished coinage at other mints.

The total expenditures at all the mints and assay offices were \$51,283.63 less than the amount specifically appropriated.

The appropriations and expenditures were distributed as shown in the following table:

*Appropriations, 1880.*

Institution.	Salaries.	Wages.	Contingent.	Coinage of standard silver dollars (act of February 28, 1878), indefinite.	Total.
Philadelphia mint.....	\$34,850 00	\$300,000 00	\$87,500 00	.....	\$422,350 00
San Francisco mint.....	24,900 00	275,000 00	87,500 00	.....	387,400 00
Carson mint.....	23,550 00	80,000 00	42,500 00	.....	146,050 00
New Orleans mint.....	21,400 00	80,000 00	*35,000 00	.....	136,400 00
Denver mint.....	10,750 00	10,000 00	6,000 00	.....	26,750 00
New York assay-office.....	33,150 00	22,500 00	9,000 00	.....	64,650 00
Helena assay-office.....	5,700 00	12,000 00	15,000 00	.....	32,700 00
Boise City assay-office.....	3,000 00	.....	6,000 00	.....	9,000 00
Charlotte assay-office.....	2,500 00	.....	1,000 00	.....	3,500 00
Total.....	159,800 00	779,500 00	289,500 00	.....	1,228,800 00

*Expenditures, 1880.*

Institution.	Salaries.	Wages.	Contingent.	Coinage of standard silver dollars (act of February 28, 1878), indefinite.	Total.
Philadelphia mint.....	\$33,633 87	\$287,645 92	\$87,498 13	\$86,221 43	\$494,998 35
San Francisco mint.....	24,900 00	252,235 75	46,525 75	.....	323,661 50
Carson mint.....	23,550 00	62,294 63	11,312 73	.....	97,157 35
New Orleans mint.....	20,961 89	77,278 91	†34,928 33	5,812 03	138,981 16
Denver mint.....	10,620 70	10,000 00	4,118 95	.....	24,739 65
New York assay office.....	33,150 00	20,765 88	8,750 12	.....	62,666 00
Helena assay office.....	5,700 00	8,656 24	9,960 19	.....	24,316 43
Boise City assay office.....	2,950 28	3,525 97	1,095 22	.....	7,571 47
Charlotte assay office.....	2,500 00	.....	915 46	.....	3,415 46
Total.....	157,974 74	722,403 29	205,104 88	92,033 46	1,177,516 37

\* Contains \$5,000 for repairs and machinery. † Contains \$4,904.06 for "Repairs and machinery."

The charges collected from depositors for parting and refining bullion are used as provided by law for paying in full the expenses thereof, including labor, material, and wastage.

The total amount collected from depositors and paid into the Treasury on account of parting and refining bullion during the year ended June 30, 1880, was \$257,771.37, of which the sum of \$249,479.23 has been expended.

The following statement shows the amount of charges and expenditures, including the proper portion of the operative wastages and loss on sale of sweeps, on account of parting and refining bullion at the mints

at Philadelphia, San Francisco, and Carson, and the assay-office at New York, during the fiscal year ended June 30, 1880.

*Refinery earnings and expenditures.*

Institution.	Charges collected.	Expenses.
Philadelphia mint .....	\$8, 773 47	\$11, 382 57
San Francisco mint.....	158, 477 34	151, 014 48
Carson City mint.....	9, 864 42	4, 537 59
New York assay office.....	80, 656 14	82, 544 59
Total .....	257, 771 37	249, 479 23

ANNUAL ASSAY.

The commission appointed by the President to make the annual test of the fineness and weight of the coins reserved from each delivery at the mints, met at the mint at Philadelphia, pursuant to law for that purpose.

The following extracts from the reports of the committees on weighing and assaying show that the examination was in all respects satisfactory. The committee on weighing report:

That from the tabular statement submitted it appears that the weights of the reserved coin from the several mints, both in masses and in single pieces, are in all cases within the limits of legal tolerance, and are therefore entirely satisfactory. The result also of the examination of the weights ordinarily employed in the mint is entirely satisfactory to the committee.

The Committee on Assaying beg leave to present the following report: That they have taken the gold and silver coins reserved from the several mints, viz, Philadelphia, San Francisco, Carson City, and New Orleans, and have assayed the same either in mass or in individual coins and have found in all cases the coins to be in conformity with law of Congress, and all safely within the limits of tolerance.

ESTIMATION OF THE VALUE OF FOREIGN COINS.

Pursuant to the provisions of section 3564 of the Revised Statutes, on the 1st day of January last estimation was made by the Director of the Mint and proclamation by the Secretary of the Treasury, of the values of the standard coins in circulation of the various nations of the world.

The basis of comparison for estimating the values of certain silver coins was changed from that taken in preceding years, for the reason stated in the correspondence relating thereto, copies of which are submitted herewith.

The values of foreign gold coins of full standard weight and fineness are readily computed and expressed in the money of account of the United States, the gold-dollar piece at the standard weight of twenty-five and eight-tenths grains having been established by section 3511 of the Revised Statutes as the unit of value.

The weight and fineness of foreign gold coins in comparison with that of such gold dollar readily determines their value.

But as to foreign silver coins, while standard dollars and fractions of dollar of given weight and fineness have been authorized and made legal tender, the standard of value legally provided has not been changed.

When gold and silver coins of the same denomination are in circulation with like actual purchasing power, the comparative values of the gold coin and gold dollar measured by their weight and fineness can

still be taken as the basis for estimating the value of both coins. But where the coinage of silver is unrestricted, and the actual circulation consists chiefly of silver coins, must the value of such coins be estimated by comparing their weight and fineness with United States silver coins, or by ascertaining their commercial value compared with the standard gold dollar?

The latter was taken as the proper construction of the law, and the values of foreign silver coins in countries where silver is the sole standard, or coined without limitation, were estimated for 1880 at their commercial gold value.

A different rule having been heretofore followed, the estimation for 1880 will show changes in the valuations of several foreign silver coins, other than would have been occasioned simply by variations in the price of silver bullion.

#### EXAMINATIONS AND ANNUAL SETTLEMENTS.

During the year personal examinations were made by the Director or his representatives of all the mints and assay-offices except those at Boise City and Charlotte.

They were generally found to be in an efficient and satisfactory condition, and the officers and employes attentive to their duties. But few errors appeared to have occurred in their transactions with individuals or in keeping their books and records and rendering their accounts to the government.

The wastage of the operative officers at the annual settlement was found in each case to be within the legal limits and appeared to have been actually incurred, and was therefore, with my approval, credited to their respective accounts.

The total wastage during the year at the coinage mints was \$18,369.14 gold, and \$26,617.93 silver.

The amount operated upon in the melting and refining departments of the mints was of gold bullion 6,905,941.191 standard ounces, upon which the legal limit for wastage was 6,905.941 standard ounces, the actual wastage only 866.174 standard ounces; and of silver bullion 51,313,811.72 standard ounces, on which the legal limit for wastage was 76,970.71 standard ounces, and the wastage 18,789.53 ounces.

The amount operated upon in the coining departments of the mints was of gold bullion 6,653,791.119 standard ounces, on which the legal limit for wastage was 3,326.895 ounces, the actual 121.164 ounces; and of silver bullion 48,302,083.84 standard ounces, on which the legal limit for wastage was 48,302.08 ounces, and the actual wastage only 4,085.23 ounces.

In the appendix will be found a statement showing in detail the wastage of the operative officers and the loss on sale of sweeps at the coinage mints and the manner in which the bullion fund was reimbursed for the same.

#### PRESENT CONDITION OF THE MINTS AND ASSAY OFFICES.

*United States Mint at Philadelphia.*—The coinage at the parent mint has been unusually heavy, having in number and value of pieces coined been double that executed in the preceding year.

The increase was chiefly in the gold and minor coinage. The yearly coinage of standard silver dollars, however, was one-quarter greater than in 1879.



The comparative deposits and coinage of the two years have been as follows:

Deposits and coinage.	1879.	1880.
Deposits, value .....	\$19,340,176	\$51,389,973
Gold coinage, pieces .....	936,564	3,789,820
Silver coinage, pieces .....	12,125,850	15,223,400
Minor coinage, pieces .....	9,620,200	26,831,850
Total coinage, pieces .....	22,682,614	45,845,070
Total coinage, value .....	\$23,552,032	\$43,103,854

It is a gratification to report that this increased coinage did not cause a proportionate increase of expenditures.

The regular and specific appropriations were, however, inadequate to meet all the expenses of the mint in accomplishing this unusual amount of work, and it became necessary to make use of the appropriations contained in the act of February 28, 1878, for the coinage of the standard silver dollar. On account of the large amount of imported gold bullion yet uncoined and the lower rates at which silver bullion can be procured for delivery at this mint, its coinage, so long as silver dollars are coined and the excessive importation of gold continues, will be unusually heavy, and increased facilities will be needed to perform the work required.

*United States Mint at San Francisco.*—The diminished production of gold and silver on the Pacific coast has sensibly affected both the amount of deposits and coinage.

The coinage at this mint was, in 1880, \$13,000,000 less of gold and \$6,000,000 of silver than in 1878.

The comparative values of the deposits and number of pieces coined for the last and preceding years, are:

Deposits and coinage.	1879.	1880.
Deposits, value .....	\$43,329,884	\$39,387,949
Gold coinage, pieces .....	1,798,500	2,284,950
Silver coinage, pieces .....	12,722,000	7,910,000
Total coinage, pieces .....	14,520,500	10,194,950
Total coinage value .....	\$42,051,250	\$36,053,000

A large number of eagles and half eagles have been coined, and consequently the number of gold pieces struck has been increased instead of diminished. Improvements in refining bullion, in the appliances used and arrangement of apparatus have been made, and experiments instituted to ascertain the most economical and desirable processes for parting and refining the precious metals. I made careful inquiry into the unusual wastage of the melter and refiner, and found upon examination of the character of the deposits and a comparison of the fineness of the bullion of the last with the preceding years, that the amount of low-grade and refractory bullion had largely increased without any deduction having been made from the weight of the deposit for the protection of the government, as authorized by the instructions.

I directed that thereafter deductions should be made on unusually base deposits of gold or silver sufficient to cover the probable and unavoidable loss on such bullion.



*United States Mint at Carson City.*—The stock of bullion at the mint having become reduced in October, 1879, to \$107,023 of gold, and \$14,362 of silver, being an insufficient supply for a single month's work, coinage was temporarily suspended, but the mint was kept open for the purchase of silver, and deposit and refining of gold and silver.

So small an amount, however, came to the mint that, up to April 16, 1880, only \$228,177 gold, and \$258,427 silver, had accumulated. This, however, was deemed sufficient to authorize the resumption of coinage operations, which were thereafter continued to the close of the year.

The deposits and coinage of 1879 and 1880 compare as follows:

Deposits and coinage.	1879.	1880.
Deposits, value .....	\$1, 339, 512	\$551, 885
Gold coinage, pieces .....	24, 357	29, 567
Silver coinage, pieces .....	1, 644, 000	408, 000
Total coinage, pieces .....	1, 668, 357	447, 567
Total coinage, value.....	\$1, 972, 310	\$654, 799

*United States Mint at New Orleans.*—The difficulty alluded to in my previous report of procuring silver bullion for this mint, which seemed likely to cripple if not destroy its usefulness, has but in part been removed. A considerable demand in the Gulf States for silver coins for circulation has necessitated monthly allotments at this mint for the coinage of 400,000 standard dollars, which is about equal to its ordinary coinage capacity with the present force and appropriations.

The deposits and coinage for the last two years have been:

Deposits and coinage.	1879.	1880.
Deposits, value.....	\$1, 195, 607	\$4, 344, 284
Gold coinage, pieces.....	.....	10, 526
Silver coinage, pieces .....	737, 000	4, 430, 000
Total coinage, pieces .....	737, 000	4, 440, 526
Total coinage, value.....	\$737, 000	\$4, 558, 500

During the year it became my painful duty to report the death of Henry S. Foote, who had been superintendent of the mint from December, 1878, until the date of his death on the 19th day of May, 1880.

A representative of this bureau was instructed to proceed to New Orleans, examine the condition of the mint, and superintend the deliveries and transfers to be made upon the appointment of a successor. Mr. Foote's continued ill health and inability to give the necessary attention to the business of the mint occasioned some neglect and laxity in keeping records and supervision of mint transactions. Upon a transfer of the funds and bullion and property belonging to the mint to M. V. Davis, who, on the 11th day of June, 1880, was promoted from coiner to superintendent, the amount of coin charged to the cashier on the books of the mint and required to be delivered was found to lack 1,000 standard dollars, which remains to be accounted for on final settlement of the account of the late superintendent.

The discrepancy was apparently a surprise to the cashier and officers of the mint. There had previously been frequent urgent demands for

the shipment of standard dollars and the error was supposed to have occurred from an undiscovered mistake in the report or count of the sacks at some delivery for distribution.

*New York assay office.*—The unusual import of gold has correspondingly increased the usefulness of this office, as will be seen by comparing the value of the deposits and of the bars manufactured in the last two years as follows :

Deposits and bars.	1879.	1880.
Gold deposits, value .....	\$11, 345, 563	\$68, 273, 628
Silver deposits, value.....	7, 019, 698	4, 491, 416
Total deposits, value.....	18, 365, 261	72, 765, 044
Gold, fine bars, manufactured .....	6, 639, 213	11, 378, 980
Gold, mint bars, manufactured.....	5, 309, 001	57, 368, 761
Silver, fine bars, manufactured.....	7, 006, 828	4, 372, 705
Silver, sterling bars, manufactured.....		24, 347
Total bars manufactured, value .....	18, 955, 042	73, 144, 795

Sixty-eight million two hundred and eleven thousand nine hundred and eighty-five dollars were paid in coin and bars to depositors. Of the deposits \$28,355,070 were during the year transported to Philadelphia for conversion into gold coin.

At the annual settlement the melter and refiner returned a surplus of 861.616 standard ounces gold above amount charged him, which had been recovered from gold not credited to the depositors contained in silver deposits.

This value, \$16,030.06 was covered into the Treasury as a miscellaneous receipt.

*The U. S. mint at Denver, U. S. assay offices at Helena, Boise, and Charlotte* have been open during the whole year for the receipt, assaying and stamping of bullion, and for the payment of coin for gold bullion, affording the miners in the vicinity opportunities for the immediate conversion of gold bullion into coin at the coinage value less the cost of transportation and mint charges. They have made and forwarded to the United States Mint unparted bars of the following value :

Name of assay office.	Year.	
	1879.	1880.
Denver.....value..	\$415, 268	\$348, 222
Helena.....do ..	730, 178	534, 601
Boise.....do ..	71, 171	147, 730
Charlotte.....do ..	54, 344	88, 352

LEGISLATION SUGGESTED.

*Melting charge.*

I respectfully suggest the propriety of imposing a melting charge in all cases on deposits of bullion either for coin or bars. Prior to 1873 a charge for refining was authorized on bullion below standard but none for melting bullion. The coinage act of that date amended the existing provision by inserting the words “melting and” before the word refin-

ing so as to permit a charge for melting and refining when bullion is below standard.

It may have been intended that the melting charge should be imposed in all cases where the value of a deposit could not be accurately ascertained without melting. But the language of the act limits the charge to "bullion below standard" and makes no provision for a melting charge when bullion is at or above standard.

Scarcely any imported gold bullion or coin is below the United States standard of fineness and liable to a charge for melting. During the last year the mints and New York assay office were required, at considerable expense, to melt free of charge not only many millions of domestic refined gold, but over \$60,000,000 of imported gold coin and bullion.

It does not seem reasonable that bullion which must be melted before assay should be exempt from paying the expense of the operation.

#### *Coinage charge.*

From 1853 to 1873 a coinage charge on gold was imposed of  $\frac{1}{2}$  of 1 per cent. During the time \$540,736,349.50 in gold was coined and the coinage charges amounted to \$2,703,681, the average yearly coinage being \$27,368,175, upon which the coinage charge amounted annually to about \$137,000.

The coinage act of 1873 reduced the charge to  $\frac{1}{4}$  of 1 per cent., and the resumption act of 1875 repealed it. Had it been continued at the latter rate on the gold coinage of the last five years which has amounted to \$232,200,788.50, the sum of \$480,000 would have been collected.

While it was uncertain whether sufficient gold could be attracted to the mints to supply the coin necessary to maintain the redemption of United States notes in gold, it may have been prudent and advisable to remove every charge that might hamper the conversion of gold into coin. And now, if our supply of metallic circulation depended upon the amount of foreign bullion brought to the mints for coinage an exemption from charge either for melting or coinage might, for similar reasons, appear to be defensible. But the amount of domestic production is more than sufficient to supply the increasing annual needs of this country for the coinage of either gold or silver and a large part of the domestic gold as well as silver, like other surplus products, must at some time in the future again be exported. It can be of no national advantage to export gold or silver in the form of coin if those coins abroad do not pass into circulation, but are there again melted and recoinced. The coinage of countries not producing the precious metals is composed chiefly of remelted foreign coins, for the latter cannot well circulate in countries having different monetary units of value.

It has been said that the remission of such charge enables a country to invite and secure gold for circulation.

The experience of the United States, France, and Great Britain shows that, other circumstances being favorable, a coinage charge does not prevent a country from securing the coinage of all the coin the condition of its foreign trade will permit it to retain.

In the United States, although from 1863 to 1873, on account of the suspension of specie payments, there was no demand for gold for circulation, \$242,416,377.50 of gold was brought to the mints and coined, notwithstanding the coinage charge of  $\frac{1}{2}$  of 1 per cent.

France imposing a charge for assay melting and coinage exceeding  $\frac{1}{4}$  of 1 per cent. (= .00216), coined in the last 30 years over \$1,300,000,000 of gold.

It is believed that no country really coins bullion free of expense to the public. In Great Britain no bullion fund is provided as in the United States for the immediate payment of the value of a deposit, and it is found more profitable to the public and even to importers, in preference to waiting for coinage at the mint, to exchange their bullion at the Bank of England for its notes at  $1\frac{1}{2}$  pence per ounce less than the coining rate. This is  $\frac{1}{6}$  of 1 per cent. ( $= .0016$ ), and with other deduction for assay and melting exceeds the former United States coinage of  $\frac{1}{6}$  of 1 per cent. (.002).<sup>\*</sup> Should it be deemed advisable to reinstate the coinage charge the present is the most favorable time, as the supply of gold bullion now in the mints is sufficient to employ them at their ordinary rate of coinage for more than a year and a half, and so long as a bullion fund is kept at the mints and assay offices out of which to pay depositors coin on the delivery of their bullion, all the gold not needed for export undoubtedly will as heretofore come to the mints regardless of the charge.

### *Reynold's Patent.*

A suit has been commenced and is now pending in the circuit court of the United States, District of California, by John Reynolds against the superintendent and melter and refiner of the San Francisco mint, for an alleged infringement of a patent issued to him on March 20, 1866, for "new and useful improvements in refining bullion."

The process of parting at the mint has been in use since its organization, and was continued by the present superintendent solely for the benefit of the United States, and if any advantage has accrued it has been to the United States and not these officers.

They ought not to be required either to pay or even be called upon to defend themselves at their own expense in this suit.

The plaintiff justifies his personal suit for the alleged reason that no court has jurisdiction of any suit he could bring against the United States.

I respectfully recommend, that the jurisdiction of the Court of Claims be extended to enable it to hear this case, or that such other legislation be obtained as will enable the patentee to test the validity of his claim, and make the government and not the officers responsible for the benefit (if any) it may have derived from the use of the process in case he substantiates his patent, and its infringement at the mint.

### *Indebtedness of the San Francisco Mint to the Treasury.*

There is charged against the San Francisco mint upon the books of the Treasury several deficits of officers, the first occurring in 1857, in the accounts of the melter and refiner, amounting to \$152,227.03, the second, \$20,000 in 1866, in the accounts between the coiner and treasurer, the third, \$10,665.28 in 1867, in the accounts of the melter and refiner, and the last, \$16,373.93, in 1869, in the accounts of the coiner, the total being \$199,366.24.

A deficit of \$21,962.85 exists by reason of the pyx coins of 1865, 1866, and 1867, sent to the Philadelphia mint for trial at the annual assay, being used in paying for supplies purchased and shipped the San Francisco mint, instead of being restored to the accounts. Besides these sums the loss on sale of sweeps and the wastage of the operative officers for a number of years prior to 1871 (although within the legal limit of allowance), amounting to \$195,158.81, were not paid as they should have

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<sup>\*</sup> Report Silver Com. vol. 1, page 229-230.

been out of the annual appropriations, and it therefore appears as a deficit in the accounts. These losses all occurred prior to the organization of the mint bureau and to the appointment of the present officers of the San Francisco mint.

Their accounts have been annually satisfactorily adjusted, and as there is no hope of collecting the amount from the former officers or their sureties, I recommend that legislation be procured to authorize the cancellation of the indebtedness by an appropriation of the necessary amount from the profit on the coinage of silver or from moneys in the Treasury of the United States.

#### STATISTICS OF THE PRODUCTION, CONSUMPTION, COINAGE, AND CIRCULATION OF THE PRECIOUS METALS.

The investigations and inquiries heretofore instituted for procuring the latest and most reliable and valuable information upon these subjects have been continued, and are presented in detail in the tables and communications accompanying this report.

#### MONETARY STATISTICS OF THE UNITED STATES.

##### *Production of gold and silver.*

As there are thousands of mines, yielding annually more or less gold and silver, scattered over an area embracing more than half of the territory of the United States, to obtain accurate and complete statistics of their aggregate production is evidently a work of great difficulty; and to make annual personal examination of each is physically impossible, without employing a large number of assistants, and expending annually an amount disproportionate to the value of the information to be obtained.

The appropriation for the collection during the present fiscal year of the statistics of the production of the precious metals in the United States became available on the 1st of July last, and the work was assigned to this bureau. Considerable progress has been made in procuring the necessary information, especially for the Pacific Coast; and the data already obtained have been found of great advantage in ascertaining the locality from which gold and silver have been obtained, as well as in estimating the total production for the last fiscal year.

Through the mints and assay offices, to which nearly all the gold and a large proportion of the silver production come yearly, and the custom-house returns, which record the movement from and into the country, the domestic product is readily ascertained. By adding to the amounts thus reported, the gold and silver of domestic production used in the arts and manufactures, other than that deposited in the mints, I estimate the production of the United States to have been, during the last fiscal year—

In gold .....	\$36,000,000
In silver (coining value) .....	37,700,000
Total .....	73,700,000

To make an intelligent estimate of the production of different States and Territories is a more difficult task, from the fact that a large portion of the deposits of both gold and silver at the mints and assay



offices comes in the form of fine bars from various refineries on both sides of the continent.

The time that has elapsed since the appropriation for the collection of mining statistics became available has been so short, and returns and information from distant localities have come in so slowly, that I find it impossible to present in this report, in proper shape, the data already obtained.

It seems therefore preferable to submit at a later date the statistics of the production of the precious metals in the various States during the last fiscal year, and when complete data shall have been received.

*Consumption of the precious metals.*

The investigation of the annual use and consumption of the precious metals in ornamentation manufactures and the arts was prosecuted in the same manner as in the previous year. A greater number of persons were addressed, and replies received, the latter showing a much greater quantity of gold and silver consumed than previously reported.

Seven thousand two hundred and ninety circular letters were addressed to parties using gold and silver in the arts and manufactures; two thousand seven hundred and ninety-one replies were received; and of the latter, one thousand three hundred and eighty-one were manufacturing.

A table is submitted showing the respective amounts of the different manufactures using gold and silver.

The amounts reported as consumed are—

	United States coin.	Fine bars.	Old articles and foreign coin.	Total.
Gold.....	\$2, 408, 768	\$5, 511, 047	\$714, 378	\$8, 634, 193
Silver.....	541, 834	2, 749, 190	173, 145	3, 464, 169
Total .....	2, 950, 602	8, 260, 237	887, 523	12, 008, 362

The New York assay office reports the value of bars made and delivered during the year for use in the arts and manufacturing, from description of bullion, as follows:

Bars manufactured from—	Gold.	Silver.	Total.
United States coin (defaced).....	\$4, 929	\$982	\$5, 911
Foreign coin .....	260, 222	72, 668	332, 890
Foreign bullion .....	1, 007, 400	278, 622	1, 286, 022
Domestic bullion .....	2, 988, 422	3, 863, 126	6, 851, 548
Plate, &c .....	304, 871	144, 992	539, 863
Total.....	4, 655, 844	4, 360, 390	9, 016, 234

The replies made to the circulars from the Mint Bureau show a consumption of about \$1,000,000 greater of fine gold bars, and \$1,600,000 less silver bars, than reported by the New York assay office.

Doubtless both statements are below the amount of gold as well as silver actually appropriated during the year for use in the arts, ornamentation, and manufactures.

The estimate of last year that in the form of bullion, coin, or plate, &c., \$5,000,000 of silver and \$7,000,000 of gold were during the present year



appropriated for purposes other than coin circulation, is sustained as to silver and increased as to gold to \$10,000,000, if not more.

An examination and comparison of these statements and of the value of the fine bars issued from all the mints lead to the conclusion that probably \$5,500,000 of gold and \$4,000,000 of silver of domestic bullion produced during the year, together with \$2,500,000 gold and \$600,000 silver United States coin, were thus consumed.

The estimated disposition made of the amount of gold and silver bullion in the mints and New York assay office at the commencement and deposited during the year, and amounts held by each at the close of the year, are presented in tabulated statements in the appendix.

### *Coin circulation of the United States.*

The coinage and net imports of United States gold and silver coin were shown in my last annual report (p. 22) to have increased the coin circulation in six years prior to the 1st of July, 1879, \$151,490,698 in gold, and \$107,050,985 in silver, being a total gain of \$258,541,683.

The coinage and imports during the last fiscal year have further augmented the metallic circulation as follows :

United States coin.	Gold.	Silver.	Total.
Amount June 30, 1879 .....	\$286, 490, 698	\$112, 050, 985	\$398, 541, 683
Coinage less recoinage.....	55, 948, 407	27, 903, 139	83, 851, 546
Net import .....	16, 519, 586	2, 642, 896	19, 162, 482
Circulation June 30, 1880 .....	358, 958, 691	142, 597, 020	501, 555, 711

During the first four months of the present fiscal year there has been a further increase by the coinage of \$14,544,599 gold and \$9,113,000 silver, and a net import of \$1,820,591 United States gold coin and \$567,524 United States silver coin, making the amount of United States coin—not including minor coins—in the country on the 1st of November, 1880, \$527,601,425, of which \$375,323,881 consisted of gold, 72,847,750 standard dollars, and \$79,429,794 of fractional coin and trade dollars, the latter probably amounting to \$7,000,000.

Besides the above amounts of United States coin the Treasury held on the 1st of November, in the mints and assay offices, \$78,558,811 of gold bullion, and \$6,043,367 of silver bullion, making an aggregate of coin in circulation and bullion in the Treasury of \$612,203,603, of which \$453,882,692 consists of gold coin and bullion.

The coin circulation on the 1st day of January, 1879 and 1880, based upon the estimate for June 30, 1878,\* and the subsequent net coinage and import of United States coin is as follows :

United States coin.	Gold.	Silver.	Total.
Amount June 30, 1878 .....	\$247, 429, 570	\$80, 352, 328	\$327, 781, 898
Net coinage to January 1, 1879.....	24, 189, 858	13, 916, 814	38, 106, 672
Net import to January 1, 1879 .....	1, 652, 279	1, 247, 570	2, 899, 849
Total January 1, 1879 .....	273, 271, 707	95, 516, 712	368, 788, 419
Net coinage to January 1, 1880.....	38, 874, 789	27, 524, 639	66, 399, 428
Net import to January 1, 1880 .....	14, 727, 586	4, 756, 343	19, 483, 929
Total January 1, 1880.....	326, 874, 082	127, 797, 694	454, 671, 776

\* Director's Report, 1879, p. 22.

The gain in coin circulation during the calendar year 1879 was \$53,602,375 in gold and \$32,280,982 in silver, a total of \$85,883,357, and the increase in coin circulation from the date fixed for resumption, January 1, 1879, to November 1, 1880, was gold coin \$102,329,718, silver coin \$56,760,832.

This computation is exclusive of the stock of gold and silver bullion in the mints and assay offices, which held for coinage January 1, 1879, \$5,038,419 in gold and \$11,057,091 in silver bullion, showing a gain of coin and bullion from that date to November 1, 1880, of \$175,701,904 in gold and \$51,697,524 in silver coin and bullion available for coinage.

In this foregoing estimates the amount of United States coin consumed in the arts and manufactures reported at about \$2,500,000 in gold and \$500,000 in silver, is not deducted for the reason that it is estimated that an equal amount of United States coin is probably brought into the country by immigrants and not reported by the custom-houses.

From the reports of the Treasurer and the Comptroller of the Currency the coin in the Treasury on the 1st of November, and in national and State banks on the 1st of October, 1880, and the estimated circulation not in the banks and Treasury appears to have been—

	Gold.	Silver.		Total.
		Legal tender.	Subsidiary.	
Treasury .....	\$62, 167, 141	\$47, 084, 459	\$24, 629, 489	\$133, 881, 089
National banks .....	95, 675, 472	*2, 500, 000	*2, 830, 357	101, 005, 829
Other banks .....	17, 102, 130	} 23, 263, 291	51, 969, 948	292, 714, 507
Private hands .....	200, 379, 138			
Total .....	375, 323, 881	72, 847, 750	79, 429, 794	527, 601, 425

MONETARY STATISTICS OF FOREIGN COUNTRIES.

The effort to gather and present in convenient form for reference statistics of the production, coinage and use of the precious metals in other countries and the amount and character of their circulation was continued with advantage during the year, and much valuable information has been obtained in reply to the inquiries transmitted by the Secretary of State at your request.

Our ministers and consuls abroad have displayed commendable zeal and activity in securing the desired statistics, and grateful acknowledgements are due to the officials of foreign governments, from whom replies have been received, for their prompt and satisfactory responses.

The information in relation to coinage, circulation, production and specie reserves has been collated from these dispatches and other sources into tables, which will be found in the appendix.†

A brief review of some of the most useful facts contained in the papers received is herewith presented :

*Great Britain.*—From the papers received it would appear the net specie exports of Great Britain were, during the year 1879, gold £2,937,000, silver £500,000. Mr. Freemantle estimates the specie circulation at the close of 1879 to have been as follows :

Gold coin, £122, 474, 000 = .....	\$596, 019, 721
Silver coin, £19, 017, 000 = .....	92, 546, 231
A total of .....	688, 565, 952

\* Not distinguished; total silver reported, \$5,330,357.

† The documents here referred to are omitted for want of space, but they are printed in the pamphlet copies of the Director's report.

which shows the circulation to be about \$23,500,000 less than my estimation for last year. It can hardly be said that there is any stock of silver bullion in the United Kingdom, the imports and exports being about equal. The coinage of gold at the royal mint was very small, being only £35,050, while the total value of silver coined was £549,054, and the amount of worn silver coin withdrawn from circulation during the year was £495,944. The report of the deputy master of the mint shows that the average price at which silver (British standard) was purchased during the year was 52½*d.* per ounce, the seigniorage accruing to the state being at the rate of 13½*d.* per ounce, or 24½ per cent. The rate of seigniorage was nearly 7 per cent. less than during the previous year.

**Australia.**—The dispatches of O. M. Spencer, consul-general at Melbourne, contain seriatim replies to the circular of the Secretary relative to monetary statistics, and also inclose interesting papers from J. W. Smith, consular agent at Port Adelaide, and from V. Delves Broughton, deputy master of Melbourne branch mint: the first giving the history of the discovery of gold in 1851 and the exodus to South Australia in consequence, and the business crises occasioned thereby, and the second an instructive account of the discovery of the “chlorine process” for separating and refining gold. Both these papers will be found well worthy of perusal.

The production of gold in the province of Victoria amounted in 1879 to 758,947 ounces, valued at \$15,000,000, and the average annual production for the past ten years has been 1,063,148 ounces, valued at \$20,000,000. No silver is mined, but a small quantity is parted from gold. The coinage at the Melbourne mint during 1879 was the largest since its establishment, amounting to £2,740,000, all in sovereigns.

**India.**—Information in regard to the paper and specie circulation of India has of late years been sought for with more than usual eagerness on account of the important relation sustained by that country to the future of silver. Two papers have been received from Consul-General Litchfield, one transmitting information from the Hon. R. B. Chapman, secretary of the government of India, together with tabular statements showing the imports, exports, and coinage of gold and silver in India, and the paper money issued by the Bengal, Madras, and Bombay presidencies from 1835 to 1879 inclusive. These tables are especially valuable as showing the immense quantity of silver absorbed by India in the last half century. The net imports of silver during 1879 were £3,970,694. The other paper contains a *résumé* of the mint laws and regulations of India.

No banks or other private corporations are allowed to issue paper money—the only notes in circulation being those of the State, for which the government holds a reserve of specie and bonds equal to the entire paper issue.

These government notes are received everywhere at their nominal value, and amount at present to \$48,060,176.

Silver is the standard of value of the country; gold is not rated a legal tender, but is received in payment of debts. The coins of other countries, or of native Indian States, do not circulate.

**Canada.**—The response of the deputy minister of finance of the Dominion of Canada, with documents, transmitted through the Hon. J. Q. Smith, consul-general of the United States, show the following facts:

There is no mint in Canada, its coin being supplied from the home government. The system of paper money of Canada is similar to that

of the United States, consisting of Dominion notes to the amount of \$12,000,000 and bank notes to the amount of \$20,000,000. The issue of Dominion notes is limited to \$20,000,000, for which specie and government securities are held.

*Germany.*—Valuable documents have been received from Germany, together with a communication from the Hon. Andrew D. White, United States minister at Berlin, commenting upon the efforts being made for the remonetization of silver by Germany, which it would appear is under consideration. The principal item of information in this paper is that the annual production of the mines (silver) of Freiberg has fallen off about \$250,000 since the demonetization of silver.

The quantity of silver remaining in Germany to be sold amounted at the close of 1879 to 3,932,353 fine pounds (63,212,574 fine ounces), which at the average price of former sales (79.824 marks per fine pound) would realize 313,896,000 marks = \$74,707,248. The loss on the sale of this silver at the rates previously realized would amount to about \$17,000,000 (an average of 21 per cent.)

*France.*—The documents received from Mr. Noyes, United States minister at Paris, show the coinage of France from 1795 to 1879 to have been—

	Francs.
Gold.....	8,716,438,200
Silver .....	5,511,952,863

The amount of specie imported in 1879 was 339,170,000 francs, and exported during the same year 424,543,000 francs. No coinage of silver was executed at the Paris mint in 1879. The gold coinage consisted of 3,860,100 francs in 100-franc and 24,610,540 francs in 20-franc pieces; in all, 28,470,640 francs, besides the coinage of a million francs in 20-franc pieces, for the principality of Servia.

The new agreement of the Latin Monetary Union went into effect on the first of the present year. A law was passed July 31, 1879, by the French legislature abolishing the contract system of coinage and creating a bureau for the management of the mint, and placing the coinage, as in this country and Great Britain, under the control of a responsible officer—called there, also, a Director—and subject to the direction of the minister of finance.

In my last report (page 28), in stating the metallic circulation of France, I said “While doubting the accuracy of the exhibit, in default of better data the estimates given are accepted.” Among the documents since received are the reports made to their respective governments by the delegates to the monetary convention of the states of the Latin Union held November 5, 1878, from which valuable information has been obtained in revising the table of circulation found in this report.

The specie circulation of France is given as—

Gold.....	\$927,000,000
Silver (full legal tender).....	540,786,000
Silver (limited tender).....	57,900,000
Total .....	\$1,525,686,000

The statement of the gold circulation is based upon the estimate for 1878 of M. Folville, adopted by Dr. Soetbeer, 5,000 million francs, from which is deducted the loss by export and use in the arts for 1879, 203,000,000 francs.

The five-franc silver circulation is stated at a mean of three estimates made by the following distinguished statisticians, after adding subse-

quent importation and subtracting exports and consumption in the arts, viz :

1st. Report made 1878 by a committee of French Chamber of Deputies through M. Guyot, five-franc pieces, close of 1877, 2,530,000,000 francs.

2d. Herr de Folville (quoted by Dr. Soetbeer), close of 1878, 2,880,000,000 francs.

3d. Ernest Seyd's estimate in 1870, with subsequent importation given in tables (less fractional silver and payment to Germany, 539,000,000 francs), close of 1879, 2,747,000,000 francs.

The circulation of five-franc pieces at the close of 1879 would be, taking the mean of these estimates, 2,802,000,000 francs.

*Austria.*—Minister Kasson transmits, under date of July 6, 1880, interesting statistics in relation to the coinage laws of Servia and a communication from the Austro-Hungarian minister of finance, giving the laws regulating the coinage of money in Austria and tables of coinage and circulation. Silver is the standard of value in Austria and Hungary. Gold as well as silver coins are struck at the mints at Vienna and Kremnitz, but the principal circulating medium is paper money, the total issue of which amounted on the 31st of December, 1879, to \$259,682,597, being about equally divided between state and bank notes.

Since the suspension of specie payments in 1848, private debts and internal taxes have been paid in bank and government notes. Customs dues are paid in gold and silver. The value of the paper money has enhanced as the value of silver became depreciated, and since the 1st of January last the paper and silver florin have been of equal value.

A dispatch is printed in the appendix from Mr. J. F. Delaplaine, of the legation at Vienna, to the effect that intelligence has been received there that the principality of Bulgaria intends coining money, the monetary unit of which will be the franc, and the total silver coinage has been fixed at 9,500,000 francs. The largest gold piece will be the "Alexander," of the value of 20 francs. The amount of the gold coinage has not been fixed. The coinage will be executed at Paris.

*Netherlands.*—The papers forwarded by our minister at The Hague show that no coinage was executed at the mint of Holland during the year 1879. The silver standard prevailed in the Netherlands up to 1875, when the double standard was adopted. The metallic money in circulation is principally silver, which is coined only on government account, and the coinage is at present restricted. The paper circulation consists of bank-notes, issued by the Bank of Netherlands, and is not a legal tender, but is received by the government and preferred by individuals, and is secured by a deposit of government interest-bearing bonds.

*The Scandinavian countries—Denmark, Norway, and Sweden.*—The documents and communications received through our ministers in relation to the monetary statistics of these countries, contain especially full and valuable information. These States still adhere to the single gold standard adopted in 1873, silver being subsidiary and for change purposes only.

The imports of gold into Norway in the year 1878 exceeded the exports by \$556,904. The imports of specie into Sweden during the two years 1878 and 1879 exceeded the exports by \$6,135,367, nearly all of this amount being gold.

The paper circulation of both countries consists of bank-notes, the governments issuing no paper money. In Denmark the National Bank of Copenhagen, a private corporation, has the sole monopoly of issuing bank-notes possessing the quality of legal tender. The bank is author-



ized to issue as much as may be required by the necessities of trade, but is required to keep a metallic reserve of not less than three-eighths of the volume of bank-notes, and bonds of an actual value, one and one-half times as great as the portion of the bank-notes in circulation not covered by the metallic reserve.

*Switzerland.*—The papers transmitted by Minister Fish contain, in addition to statistics of coinage and circulation, the laws governing the organization and coinage of the Federal mint.

Switzerland, being one of the States of the Latin Union, does not depend upon its own coinage for its circulation, as the coins of the States composing the Union circulate freely in all. No gold is coined in the confederation. The coinage of silver from the year 1850 to December, 31, 1879, was 50,052,828 francs = \$10,000,000, nearly. No government paper is issued, and bank-notes are not a legal tender. The amount of this currency is about \$17,000,000.

*Italy.*—The dispatch and inclosures from our minister at Rome show the coinage of the Italian mint from 1862 to 1878, inclusive, to have been gold, \$48,175,695; silver, \$96,621,945, and the production of the mines for the years 1875, 1876, 1877: Gold, \$143,013; silver, \$60,988.

The paper circulation is reported by the minister of finance to have been September 30, 1879, \$315,788,724.

The specie circulation was estimated at \$57,900,000, of which about \$38,000,000 are held as a reserve by the treasury and banks.

*Portugal.*—The dispatch of Minister Moran, under date of June 26, 1880, contains very desirable and complete information in relation to the monetary affairs of Portugal, including tables showing the amount of gold and silver coined in Lisbon from 1855 to 1879, inclusive, and the imports of coin and bullion from 1869 to 1878, inclusive.

Portugal has the single gold standard, and the English sovereign and half sovereign are almost the only gold coin in circulation. Silver is a legal tender to the amount of 5 milreis (\$5.40). The Bank of Portugal is the financial agent and depository of the government; its outstanding paper circulation amounts to about \$5,000,000.

*Russia.*—The papers received through our legation at St. Petersburg will be found valuable as containing the production of the mines of this country, one of the largest producers of the precious metals.

The production of gold in Russia from 1751 to the present time has been 80,000 poods = \$793,760,000. During the ten years from 1868 to 1877 the production was—

Gold, 21,230 poods.....	\$210,635,570
Silver, 8,630 poods.....	5,354,045

The net exports of gold and silver coin, and bullion for ten years from 1869 to 1878, inclusive, was \$107,106,900.

Russia has a large paper circulation, amounting to about \$775,000,000, while the amount of coin in the State banks is about \$115,000,000, of which about \$8,000,000 is silver.

*Turkey.*—Very interesting dispatches from the Hon. Horace Maynard, late United States minister to Turkey, together with official papers from the officers of the Ottoman Empire in relation to the money and finances of that country have been received, also a copy of official decrees in relation to the issue of paper money.

The government of Turkey coins both gold and silver on its own account; that is, buys the bullion at the imperial mint at Constantinople at the rate of 48 piasters per drachm of pure gold, and 3.12½ piasters per drachm of pure silver of standard fineness, and lower rates for bullion below standard.



The proportion of gold to silver in the Turkish coinage is as 1 to 15.0909.

The coin circulation of Turkey is reported as about \$15,000,000. The British pound and French franc pieces also circulate freely. The principal circulating medium of Turkey has been paper money, but it has become so enormously depreciated that its circulation is almost abandoned, and the government is making efforts to replace it with silver.

The amount of paper outstanding March 31, 1880, was estimated to be in the neighborhood of \$21,000,000. The relative value of Ottoman moneys is shown by the following statement, furnished by Mr. Maynard, giving the rate of exchange between the different kinds:

Date.	Gold.	Silver.	Beshlix (heavily alloyed silver).	Copper.	Paper.
December 2, 1879 .....	100	106½	117 <sup>17</sup> / <sub>100</sub>	370	800

To those interested in Turkish finance, the papers in the appendix will be found worthy of perusal.

*Mexico.*—The dispatches from Mexico show that the production of the mines during the year 1879 was, gold \$989,161, silver \$25,167,763, and that the circulation of coins of other countries has been considerably reduced by exportation. The standard of value is the silver dollar.

*Central American States.*—The communications from our minister at Guatemala show the amount of gold and silver in circulation in Costa Rica to be about \$2,500,000, in addition to a considerable amount of foreign coins, the values of which are fixed by law. The gold coined from 1829 to 1877 was \$2,318,381, silver \$373,919. Notwithstanding the rich minerals which abound in the republic, lack of capital and intelligent labor prevents the mines from being worked on the large scale their value merits.

The laws of Nicaragua, promulgated under date of May 29, 1880, provide for the coinage to the extent of \$100,000 of silver pieces of 20, 10, and 5 cents, eight-tenths fine, to be a legal tender in the State. A one-cent coin has also been made by decree of 1878 a legal tender in any quantity. No information with regard to the circulation of Nicaragua has been obtained.

The State of Salvador uses principally coins of other nations and paper as its circulating medium. The coins of the United States, Mexico, and England are preferred and command a premium. The paper circulation is placed at \$60,000.

*South American States.*—Dispatches have been received from only three of the South American countries, Venezuela, Peru, and Argentine Republic. In Peru gold is the legal standard of value and the Inca is the monetary unit. Silver is limited as legal tender to 25 pesetas. The pound sterling of England has been provisionally adopted as legal money. No statistics in regard to the amount of circulation of either coin or paper are furnished.

The circulation of gold and silver in the Argentine Republic is about \$7,000,000, a little over a million of which is held by the First National Bank; about two-thirds of this amount is gold. The paper circulation is very large, amounting to \$364,000,000, and in addition \$9,470,000 of metallic notes. The production of the mines is calculated at 3,800 ounces of gold and 325,000 ounces of silver, during 1879. The gold is obtained from the copper mines and is exported to England. The exportation of

specie is chiefly carried on with that country, and amounted in the last year to about \$2,000,000.

Venezuela coins no money; but the French franc, under the name of *bolivar*, is the monetary unit, and all laws relating to finance are adopted from the French. Its silver mines are not worked. The production of the gold mines in the year 1875-'76 amounted to \$1,324,000. Paper money is not issued by the government, but the notes of the Bank of Carracas are in circulation to the extent of \$250,000.

*Cuba and Hayti.*—The dispatch from our consul-general at Havana states that the amount of gold and silver coin in the treasury is nominal only, and that the amount of gold coin in the Bank of Havana, April 30, 1880, was \$10,522,000. The gold in circulation in the island is estimated at \$32,500,000 and silver \$1,000,000. The legal standard of value is the gold dollar (peso).

There is no gold or silver mined and no mint, its coins being imported from Spain. The bills of the Spanish Bank of Havana constitute the paper currency, and amounted on the 30th of April last to \$57,857,000, of which \$44,900,000 had been issued on account of the government. The dollar of this paper circulation is worth about 41 cents in United States gold coin. The imports and exports are about equal.

Two dispatches from Hon. John M. Langston, minister to Hayti, have been received. There is no bank or paper currency of any kind in Hayti. Prior to 1872 it had a paper currency estimated as high as \$800,000,000, of which \$544,675,404 was redeemed at the rate of 300 paper for one of silver, \$2,154,266 in American silver having been provided therefor. The present coin circulation is estimated at about \$5,000,000, consisting chiefly of American and Mexican coins. United States gold and silver coins are held in especial favor, the former selling generally for a considerable premium, and the latter, as against Mexican dollars, being held preferable, sometimes selling as high as 7 per cent. premium. A million Mexican silver dollars have recently been imported into the island, and a decree was issued compelling merchants to receive them at par.

*Japan.*—Hon. John A. Bingham transmits under date of April 14, 1880, very complete information in relation to the monetary statistics of Japan. He also notifies this country of the establishment of a branch of the imperial mint at Tokio, and incloses a copy of the regulations governing it. The production of the mines of Japan during the fiscal years of 1878 and 1879 was gold 36,870 ounces, silver 1,272,515 ounces. The net exports for the same years were gold 661,787 ounces, silver 3,973,673 ounces. The minister of foreign affairs reports the total paper circulation at \$147,288,681, nearly all of government issue, while the coin and bullion in circulation and reserve amount to nearly \$150,000,000, about one-third being silver.

*Egypt.*—The communication from our consul-general at Cairo states that the gold piaster is the unit of account in Egypt, and that gold is generally the circulating medium, silver being only used for purposes of change. Of the gold coins English sovereigns constitute the larger part. There is no paper currency. The treasury reserve is limited. No gold or silver is produced in the country.

*African States.*—Dispatches have been received from United States consuls at Algiers, Morocco, and Cape of Good Hope, which state that there are no gold mines in any of those countries, and that the production of silver is insignificant. Algiers has no mint and uses French coins as its principal metallic medium, which amounts to about \$8,500,000 in gold, and \$5,500,000 in silver. The Bank of Algeria is authorized to

issue currency, of which there is outstanding between eight and nine millions of dollars.

The circulation of Morocco consists principally of French and Spanish gold and silver coin, the amount of which is not known. Moorish gold coins have disappeared from circulation, having been exported to Europe on account of their high standard. Gold dust and trinkets brought by caravans are exported in small quantities. Morocco has no banks and no paper circulation.

British coin constitutes the circulating medium of the Cape of Good Hope, the amount of which is not known.

#### THE WORLD'S PRODUCTION OF GOLD AND SILVER.

No new facts have been obtained which would materially change the estimates and conclusions presented in my last report of the annual supply and appropriation of the precious metals.

A valuable table is presented in the appendix showing the production of the principal producing countries of the world for the years 1877, 1878, and 1879, and estimating the small amount produced from the mines of other countries.

The reported production of Russia and Australia, next to this country, the largest gold-producing countries, somewhat exceeds the estimate in my report for last year.

The total gold product for the calendar year 1879 (the United States and Japan alone being for the fiscal year, which would not materially alter the total) was \$105,365,697, and silver \$81,037,220, which is 8 millions of gold and one-half million of silver less than the annual average given by Dr. Soetbeer for 1871-1875.

#### THE COINAGE OF FOREIGN COUNTRIES.

The drain of gold during the last calendar year from Europe to the United States has had a marked effect upon the gold coinage of several countries, not only from the export of our own gold having ceased to supply them with material for new coinage, but because the United States has appropriated the stock of bullion from other gold-producing countries, as well as large amounts of foreign gold coins, and absorbed almost the entire world's production for the year.

The British mint was occupied with the coinage of gold only during a part of the month of December, and coined but \$170,571. Less than \$5,000,000 was coined at the French, and about \$11,000,000 at the German mints in 1879, which present a striking contrast to the coinage of \$39,080,000 gold at the United States mints, and an accumulation of gold bullion by the 1st of January amounting to \$60,734,318 beyond the capacity of the mints for coinage. A table of coinages for the years 1877, 1878, 1879, to be found in the appendix, shows the total coinages of 19 countries to have been for the

Years—	Gold.	Silver.	Total.
1877 .....	\$201, 616, 466	\$114, 350, 332	\$315, 975, 798
1878 .....	188, 386, 611	161, 191, 913	349, 578, 524
1879 .....	89, 969, 091	117, 318, 293	207, 287, 384

# COIN AND PAPER CIRCULATION OF THE PRINCIPAL COUNTRIES OF THE WORLD.

The papers forwarded through the State Department contain recent and authentic information in regard to the paper currency, as well as the specie circulation and bank reserves of foreign countries.

Tables have therefore been prepared presenting both the coin and paper circulation of nearly every commercial nation, giving the *per capita* amount of each.

The figures given for each of the 31 countries embraced in the table are believed to approximate their actual coin and paper circulation.

The aggregates are, of paper \$4,021,721,853, gold \$2,819,301,004, silver full legal-tender \$2,060,697,480, and limited tender \$422,252,541; total paper and specie \$9,470,564,706; total specie \$5,488,842,853. The statement of the amount of gold and silver in circulation in the world at the present time is below the usual estimate, and is less than half of the production since the discovery of America, which was estimated in the report of the Silver Commission, page 78, to have been, gold \$5,841,000,000, silver \$7,072,000,000; total \$12,913,000,000.

As bearing upon the question of the proper specie reserve to paper circulation, the amounts of coin and bullion in banks and national treasuries available for the redemption of their outstanding paper issues, as far as could be ascertained from the dispatches and latest reliable authorities, are, for convenient reference, tabulated and submitted with this report.

## COURSE OF PRICES.

The past fiscal year has exhibited monetary phenomena unusual and unexpected. The deficient harvests in Europe, and our unusual bounteous supply of exportable food, produced an importation of gold unchecked by advancing prices or the amount of existing circulation, already seemingly abundant. The heavy importation of foreign coin and bullion which commenced in August, 1879, continued until the close of the calendar year, and has been again resumed within the last three months. The remarkable increase of metallic circulation has been largely absorbed by the business community.

The speculative advance in prices first in the United States and then abroad subsided in part before the close of the year. Comparisons of the prices of 1880 with those of former years have been made similar to those in my last report. The table of the prices of exported commodities at different periods and for the whole of the last fiscal year shows an advance of  $8\frac{1}{2}$  per cent. on the average prices of the same commodities during the fiscal year 1879, and but 6 per cent. below the gold prices of the same commodities in 1870.

In this connection an examination will be interesting of a table in the appendix compiled from official data contained in this and the preceding report, showing the increase of the net gain in specie in France from 1850 to 1878, and the outstanding bank circulation, and the comparative prices of exports and imports for a corresponding period.

It has been a gratification to find at every institution, and among those connected with the Mint Bureau, a commendable desire to secure the highest efficiency for every branch of the Mint service. During the year over \$133,000,000 of gold and silver bullion received on deposits or silver purchases, and, in addition, nearly \$40,000,000 received on transfers from other institutions, have been faithfully accounted for.

In the preparation of the statistical information embraced in this re-

port, as well as in the discharge of the routine duties of the office, I have had the ready co-operation of the clerks in the Mint Bureau, for whose valuable assistance I desire to make acknowledgments.

I am, very respectfully,

HORATIO C. BURCHARD,  
*Director of the Mint.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

## REPORT OF FIRST COMPTROLLER OF THE TREASURY.

TREASURY DEPARTMENT,  
FIRST COMPTROLLER'S OFFICE,  
*Washington, November 10, 1880.*

SIR: In compliance with the request contained in your letter of September 14, 1880, I have the honor to submit the following report of the transactions of this office during the fiscal year which ended June 30, 1880.

• • • • •

### INVESTIGATIONS.

The Secretary of the Treasury is authorized by general laws and appropriation acts to make investigations in many cases of the official transactions and accounts of officers in the public service under the Treasury Department. The exercise of this power in proper cases has a most salutary effect.

These investigations have generally been made by clerks in the Treasury Department detailed for the purpose, and have been attended with considerable expense, especially when conducted at long distances from the capital. It is believed that it would contribute to the efficiency of the public service, and aid in securing fidelity and economy, if the Secretary should be authorized to require any officer connected with this Department whom he might designate to make the requisite investigations, especially if the officers so deputed could be invested with power in some form to secure the presence of witnesses, evidence under oath, and the production of books and papers.

If, upon the request of the Secretary of the Treasury, the heads of other Departments respectively should be authorized to require officers connected therewith to make similar investigations for the Treasury Department, it might be found of great practical value.

Investigations could thus be made by officers not now subject to the direction of the Secretary of the Treasury, and in the vicinity of the transactions requiring examination. This would be attended with advantage in the means of local knowledge, and in facilities for acquiring information, by affording ample time for ascertaining all material facts, and with the least possible expense.

It has sometimes been found necessary to ascertain facts and procure information on questions of law in foreign countries. Thus, government bonds have been held by citizens or subjects of foreign governments, and upon the death of the owners, controverted questions of fact and of law, as to the proper parties entitled to the bonds, have arisen, requiring determination in this office. If the Secretary of the Treasury should be invested with power to call upon any representative or agent of our



government abroad to make investigations and report the result, and if such representatives and agents should be given ample authority to require evidence and the production of papers by citizens of the United States in foreign countries, and by citizens or subjects of foreign governments, so far as by them permitted, it is believed it would be found a salutary means of securing justice, of facilitating the operations of the Treasury Department, and a protection to the Treasury.

#### LOST AND DESTROYED BONDS.

Section 3702 of the Revised Statutes enacts that whenever it appears to the Secretary of the Treasury, by clear and unequivocal proof, that any interest-bearing bond of the United States has, without bad faith upon the part of the owner, been destroyed wholly or in part, or so defaced as to impair its value to the owner, and the bond is identified by number and description, the Secretary shall, under such regulations and with such restrictions as to time and retention for security or otherwise, as he may prescribe, issue a duplicate thereof, etc.; or, if the bonds have been called in for redemption, instead of issuing a duplicate, it shall be paid.

The next section enacts that the owner shall file in the Treasury a bond, in a sum prescribed, with two good and sufficient sureties, residents of the United States, to be approved by the Secretary, with condition to indemnify and save harmless the United States from any claim upon such destroyed or defaced bond.

Applications for duplicates, or for the redemption of "called lost" bonds, are referred under regulations prescribed by the Secretary of the Treasury to the First Comptroller, to be decided upon by him.

My predecessor, Hon. A. G. Porter, in the report of the office for the last fiscal year, made the following statement and recommendation :

It will be perceived that bonds payable to bearer come within the terms of this statute ; and the practice has been to issue duplicates for, or to redeem, bonds of this character alleged to have been destroyed, upon evidence furnished by affidavits taken before certain prescribed officers of the United States. The redemption of such bonds and the issuing of duplicates have always been refused until after the lapse of six months from the filing of an application ; but even with this precaution the statute is fraught with great danger to the Treasury. In practice it has been found that in fully half the cases where evidence has been offered to establish the fact of destruction, the bonds have not been destroyed, but have passed either by theft or collusion into the hands of other holders. When a bond of this kind is lost or stolen, the owner who has been deprived of it is apt soon to persuade himself that it has been destroyed, as only in case of its having been destroyed can he entertain reasonable hope of ever receiving payment. Instances also have occurred of persons offering most impressive evidence of the destruction of bonds alleged to have been owned by them, who, subsequent events have shown, had no title to them whatever. Great vigilance has been practiced by the Treasury by the invocation, even when very slight doubt has been excited, of the aid of the secret-service division ; but it is believed that no vigilance can be sufficient to guard against the ingenious methods by which fraudulent applications may occasionally be made successful. If no radical change is made in the existing statute, authority ought at least to be given to require more than two sureties to the bond of indemnity.

I concur in this recommendation.

The greatest danger of loss to the Treasury arises from the possibility that the sureties upon the bonds of indemnity may prove to be worthless in the event of a suit against them. The regulations of the Department provide that the sufficiency of the sureties must be approved by some one of several prescribed officers. Most of these officers have performed the duty imposed upon them with the utmost fidelity, but in many cases such approval is made without any knowledge whatever of the parties, the officers feeling that such duties are extra-official, and that they are not required to make an examination into the condition of the sureties.

A wise caution would dictate that the Secretary be empowered to require each officer to make a thorough examination into the financial status of the parties to bonds before appending his approval of the same, and that such officers be invested with authority to require evidence under oath.

It may also be found proper to make some regulations by statute in relation to the payment of lost government bonds.

#### LAW CLERK AND STENOGRAPHER.

A law clerk and a stenographer are deemed necessary for the efficiency of the service in this office. The First Comptroller is the law officer of the Treasury Department. He is charged with the duty of ultimately deciding all questions of law arising upon warrants for the payment of money from the Treasury, and the accounts of the Treasurer of the United States. This includes all the agencies by which money may be paid from the Treasury. The decisions so made are generally final, subject only to the revision of Congress, and in certain cases, not frequent in practice, by the Court of Claims. (*Winnisimmet Company v. United States*, 12 Court of Claims Reports, 326.)

It must be apparent that questions of great magnitude and difficulty are frequently presented for decision. Counsel of great ability are often retained by claimants to present oral and written or printed arguments against the government, which is not represented by counsel. It is therefore important that every reasonable aid should be furnished to this office to protect the interests of the government.

#### DECISIONS OF FIRST COMPTROLLER.

It is so important that the leading general principles of law applicable to the business of the Department should, so far as practicable, be settled, and in an accessible form, that it has been deemed proper, in order to secure these objects, to prepare and cause to be printed formal decisions in a considerable number of cases. A copy of these is herewith transmitted. None of the decisions made by my predecessors have been printed, except in rare instances.

The work of preparing decisions in the form now adopted involves much research and labor, but it is hoped the result may be found acceptable, and of such utility as to justify it.

#### STATUTE AS TO PERJURY.

There may be some doubt whether the existing statute defining perjury is sufficiently broad to include all cases of corrupt false swearing in affidavits used for various purposes in the Treasury Department. Affidavits are necessarily used for a great variety of purposes, and it is of the utmost importance that all who make them should be amenable to punishment in cases deserving it. A comprehensive provision on this subject was included in a bill introduced in the Forty-fourth Congress, on which no final action was taken (H. R. 451, first session Forty-fourth Congress, January 5, 1876).

I respectfully submit that the subject is worthy of consideration by Congress.

#### UNPAID BALANCES.

In the adjustment of the accounts of receivers of public moneys, and other officers whose duty it is to collect the revenues of the government, such officers are charged with the amount of their collections and cred-

ited with the amount of money deposited by them in the Treasury. In many cases officers have deposited by mistake more money than they have collected, thus creating a balance in their favor.

The seventh clause of the ninth section of Article 1 of the Constitution prohibits the payment of any money from the Treasury, except in consequence of appropriations made by law. The above accounts come under no appropriation now existing, for the money deposited and covered into the Treasury constitutes an unappropriated fund, and the accounts of such officers under appropriations for the payment of their compensation and the expenses of their offices are kept entirely distinct from their accounts for the collection of revenues. In the absence of a provision for the payment of balances upon the latter class of accounts they have accumulated from year to year until quite a number now stand upon the books of the Department. It would be a great convenience if means for their payment should be provided.

I respectfully call attention to, and renew, the recommendations made by my predecessor in his last annual report.

The deputy comptroller, chiefs of division, clerks, and other persons employed in this bureau, deserve commendation for the intelligence, ability, and fidelity with which they have performed their respective duties.

I am, very respectfully, your obedient servant,  
WILLIAM LAWRENCE,  
*First Comptroller.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

REPORT OF SECOND COMPTROLLER OF THE TREASURY.

TREASURY DEPARTMENT,  
SECOND COMPTROLLER'S OFFICE,  
*Washington, October 29, 1880.*

SIR: In compliance with your direction, by letter of the 14th ultimo, I submit a report, in two tabular statements, of the transactions of this office during the fiscal year which ended on the 30th day of June 1880.

The first tabular statement shows the total number of accounts, claims, and cases of every kind settled and adjusted, and the amounts allowed thereon. The second table furnishes a more detailed statement of the same accounts, claims, and cases; showing the character of the accounts, the source from which received, the number of each kind, and the amounts allowed. A still more detailed statement is prepared and filed for preservation in this office, but it is deemed too voluminous for publication.

From—	Number revised.	Amounts.
Second Auditor.....	9,354	\$17,786,881
Third Auditor.....	5,273	50,890,845
Fourth Auditor.....	1,862	15,986,625
Various sources not involving present expenditure .....	16,489 2,494	84,664,251 462,863
Total number accounts and claims and amounts settled .....	18,983	85,127,213

*ACCOUNTS REVISED during the year.*

Character of accounts.	Number revised.	Amounts.
<b>FROM THE SECOND AUDITOR.</b>		
1. Of recruiting officers, for regular recruiting service.....	273	\$145,321
2. Of paymasters, for pay of the Army.....	433	9,293,679
3. Of disbursing officers of the Ordnance Department, for ordnance stores, supplies, armories, and arsenals.....	200	885,591
4. Of disbursing officers of the Medical Department, for medical and hospital supplies and services.....	10	8,101
5. Of disbursements for the contingent expenses of War Department.....	153	80,816
6. Special accounts settled by the Pay Division.....	1,134	315,551
7. Of Indian agents' current and contingent expenses, annuities, and instalments.....	2,631	6,630,848
	4,834	17,364,907
<b>FROM THE THIRD AUDITOR.</b>		
1. Of disbursing officers of the Quartermaster's Department, for regular supplies and incidental expenses.....	1,014	11,693,244
2. Of disbursing officers of the Subsistence Department.....	669	2,811,904
3. Of disbursing officers of the Engineer Department, for military surveys, construction of fortifications, river and harbor surveys and improvements.....	84	4,820,225
4. Of pension agents, for payment of Army pensions.....	176	28,625,467
	1,943	47,955,860
<b>FROM THE FOURTH AUDITOR.</b>		
1. Of disbursing agents of the Marine Corps.....	9	717,979
2. Of paymasters of the Navy proper.....	94	4,564,446
3. Of paymasters of the navy-yards.....	82	6,675,719
4. Of paymasters of the Navy as Navy agents and disbursing officers.....	14	2,808,091
5. Of Navy pension agents, for payment of pensions of Navy and Marine Corps.....	94	947,164
6. Of miscellaneous naval accounts.....	37	138,197
	330	15,871,596

*CLAIMS ALLOWED during the year.*

Character of claims.	Number.	Amounts.
<b>FROM THE SECOND AUDITOR.</b>		
1. Soldiers' pay and bounty.....	4,520	\$421,974
<b>FROM THE THIRD AUDITOR.</b>		
1. Property lost under the act of March 3, 1849.....	577	101,400
2. Quartermasters' and commissary stores and supplies, act of July 4, 1864, transportation and miscellaneous.....	2,711	2,696,701
3. Oregon and Washington Indian war claims.....	34	6,096
4. State war claims.....	8	130,788
<b>FROM THE FOURTH AUDITOR.</b>		
1. Sailors' pay and bounty.....	1,307	104,991
2. Prize money.....	225	10,037
	9,382	3,471,988

*CASES NOT INVOLVING PRESENT EXPENDITURE.*

	Number.	Amounts.
1. Duplicate checks approved.....	428	\$70,808
2. Financial agents' accounts.....	4	431,994
3. Referred cases adjusted.....	2,062	.....
	2,494	462,862

	Number.
Bonds filed during the year.....	92
Contracts filed during the year.....	1,597
Official letters written.....	1,495
Requisitions recorded.....	11,708
Settlements recorded.....	7,785
Differences recorded, pages.....	4,987
Clerks, average during year.....	52.8

All the public business intrusted to my charge is, I believe, promptly and properly attended to by the officers and clerks of the office, and has progressed with reasonable dispatch.

Very respectfully,

W. W. UPTON,  
*Comptroller.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

## REPORT OF THE COMMISSIONER OF CUSTOMS.

TREASURY DEPARTMENT,  
OFFICE OF COMMISSIONER OF CUSTOMS,  
*Washington, October 21, 1880.*

SIR: I have the honor to submit herewith, for your information, a statement of the work performed in this office during the fiscal year ending June 30, 1880:

Number of accounts on hand July 1, 1879.....	299
Number of accounts received from the First Auditor during the year.....	6,430
	<u>6,729</u>
Number of accounts adjusted during the year.....	6,576
Number of accounts returned to the First Auditor.....	13
	<u>6,589</u>
Number of accounts on hand June 30, 1880.....	140

There was paid into the Treasury from sources the accounts relating to which are settled in this office—

On account of customs.....	\$186,522,064 60
On account of marine-hospital tax.....	386,973 33
On account of steamboat fees.....	282,468 96
On account of fines, penalties, and forfeitures.....	123,786 28
On account of storage, fees, &c.....	840,780 27
On account of deceased passengers.....	170 00
On account of emolument fees.....	183,150 91
On account of mileage of examiners.....	1,082 70
On account of interest on debts due.....	9,381 14
On account of rent of public buildings.....	12,560 30
On account of relief of sick and disabled seamen.....	1,619 54
On account of proceeds of government property.....	14,573 52
Aggregate.....	<u>188,378,611 55</u>

And there was paid out of the Treasury on the following accounts, viz:

Expenses of collection.....	\$6,023,253 53
Excess of deposits.....	2,632,164 44
Debentures.....	1,831,060 76
Public buildings.....	2,290,511 73
Construction and maintenance of lights.....	2,426,370 61
Construction and maintenance of revenue-cutters.....	843,989 57
Marine-hospital service.....	402,917 49



Life-saving stations .....	\$518,407 43
Compensation in lieu of moieties.....	32,186 30
Seal-fisheries in Alaska.....	9,571 02
Metric standard weights and measures .....	6,316 90
Debentures and other charges.....	136 91
Detection and prevention of frauds upon the customs revenue.....	19,994 32
Unclaimed merchandise.....	1,750 41
Refunding moneys erroneously received and covered into the Treasury.....	127 50
Refunding duties to University of Notre Dame du Lac.....	2,334 07
Protection of sea-otter hunting grounds and seal-fisheries in Alaska..	22,902 88
<b>Aggregate.....</b>	<b>17,063,995 87</b>

The number of estimates received and examined.....	3,505
The number of requisitions issued.....	3,505
The amount involved in requisitions .....	\$15,062,080 75
The number of letters received.....	10,452
The number of letters written.....	10,378
The number of letters recorded.....	10,342
The number of stubs of receipts for duties and fees returned by collectors.....	205,009
The number of stubs examined.....	215,306
The number of stubs of certificates of payment of tonnage dues received and entered .....	10,481
The number of returns received and examined.....	11,941
The number of oaths examined and registered .....	3,992
The number of appointments registered .....	3,227
The average number of clerks employed.....	30

I inclose herewith a statement of the transactions in bonded goods during the year ending June 30, 1880, as shown by the adjusted accounts.

I am, very respectfully, your obedient servant,

H. C. JOHNSON,  
*Commissioner of Customs.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

## REPORT OF THE FIRST AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
FIRST AUDITOR'S OFFICE,  
Washington, October 21, 1880.

SIR: In compliance with your letter of the 14th ultimo, I have the honor to submit the following exhibit of the business transacted in this office during the fiscal year ending June 30, 1880:

Accounts adjusted.	Number of accounts.	Amount.
<b>RECEIPTS.</b>		
Duties on merchandise and tonnage.....	1,355	\$163,998,486 63
Steamboat fees.....	1,136	293,255 48
Fines, penalties, and forfeitures.....	608	126,445 02
Marine-hospital money collected.....	1,582	370,285 51
Official emoluments of collectors, naval officers, and surveyors.....	1,276	616,569 70
Moneys received from sales of old materials, rents, &c.....	171	155,694 87
Moneys received on account of deceased passengers .....	33	480 00
Miscellaneous receipts.....	593	804,380 96
Treasurer of the United States, for moneys received .....	3	906,351,686 31
Mints and Assay Offices.....	31	133,289,717 55
Water rents, Hot Springs, Arkansas.....	9	1,903 36
Receipts on counter warrants.....	238	280,524 32
<b>Total .....</b>	<b>7,035</b>	<b>1,206,298,429 71</b>

Accounts adjusted.	Number of accounts.	Amount.
<b>DISBURSEMENTS.</b>		
Expense of collecting the revenue from customs .....	1,486	\$5,464,960 40
Debentures, drawbacks, &c. ....	178	8,932,280 83
Excess of deposits refunded .....	403	2,281,681 33
Revenue-cutter service .....	507	767,352 41
Duties refunded, fines remitted, judgments satisfied, &c. ....	1,747	328,436 00
Marine-hospital service .....	1,247	416,049 17
Official emoluments of collectors, naval officers, and surveyors .....	1,256	639,539 08
Awards of compensation .....	108	30,630 85
Light-house Establishment, miscellaneous .....	67	61,776 99
Salaries of light-house keepers .....	437	611,341 07
Supplies of light-houses .....	163	565,363 78
Repairs of light-houses .....	112	370,787 59
Expenses of light-vessels .....	121	304,652 46
Expenses of buoyage .....	158	490,183 36
Expenses of fog-signals .....	87	81,990 83
Expenses of lighting and buoyage of the Mississippi, Missouri, and Ohio rivers .....	38	179,581 54
Expenses of inspection of lights .....	12	3,099 37
Steam-tenders for the Light-House Service .....	19	105,172 36
Commissions on light-house disbursements .....	124	8,582 58
Salaries and mileage of Senators .....	1	125,808 71
Salaries, officers and employes, Senate .....	5	180,498 86
Salaries and mileage, members and delegates House of Representatives...	1	1,200,622 42
Salaries, officers and employes, House of Representatives .....	12	246,649 34
Salaries of employes, Executive Mansion .....	6	47,636 80
Salaries paid by disbursing clerks of the Departments .....	322	5,499,072 62
Salaries, officers and employes, Independent Treasury .....	28	319,688 96
Salaries of the civil list paid directly from the Treasury .....	1,285	565,091 44
Salaries, office of the Public Printer .....	4	13,600 00
Salaries, Bureau of Engraving and Printing .....	13	23,926 71
Salaries, Congressional Library .....	6	52,038 93
Salaries, standard weights and measures .....	5	5,358 40
Salaries, Steamboat Inspection Service .....	4	180,012 46
Salaries, special agents, Independent Treasury .....	4	3,699 85
Salaries, custodians and janitors .....	7	75,594 51
Salaries, Botanic Garden .....	3	7,549 10
Salaries and expenses, Hot Springs Commission .....	5	28,065 02
Salaries and expenses, Southern Claims Commission .....	13	9,427 93
Salaries of employes, public buildings and grounds .....	5	34,933 22
Salaries and expenses of National Board of Health .....	13	190,836 60
Salary of Director of Geological Survey .....	6	5,126 37
Contingent expenses, Executive Mansion .....	5	7,064 29
Contingent expenses, United States Senate .....	48	179,443 62
Contingent expenses, House of Representatives .....	72	221,190 93
Contingent expenses, Departments, Washington .....	578	398,986 68
Contingent expenses, Independent Treasury .....	154	42,691 92
Contingent expenses, Steamboat Inspection Service .....	788	34,922 02
Contingent expenses, public buildings and grounds .....	4	462 48
Contingent expenses, office of Public Printer .....	6	1,313 09
Contingent expenses, Southern Claims Commission .....	14	5,264 93
Contingent expenses, National Currency, reimbursable .....	42	55,229 39
Contingent expenses, Court of Claims .....	3	1,839 68
Contingent expenses, Library of Congress .....	5	509 95
Contingent expenses of the Executive offices, Territories .....	13	4,186 87
Stationery, Interior Department .....	10	43,809 27
Treasurer of the United States, for general expenditures .....	3	833,118,463 88
Treasurer of the United States, for sinking-fund, Pacific railroads .....	4	306,508 71
Gold and silver bullion accounts .....	31	131,817,754 56
Ordinary expenses, Mints and Assay Offices .....	146	982,735 44
Parting and refining bullion .....	18	216,726 87
Coinage of standard silver dollars .....	15	55,947 89
Freight on bullion .....	5	9,245 75
Recoinage of gold and silver coins .....	3	5,090 94
Transportation of coin and bullion .....	10	21,241 39
Storage of silver dollars .....	3	2,085 61
Manufacture of medals .....	1	2,348 69
Legislative expenses, Territories of the United States .....	20	87,775 17
Captured and abandoned property .....	1	4,576 92
Defending suits and claims for seizure of captured and abandoned property.	7	23,138 84
Examination of rebel archives and records of captured and abandoned property .....	3	3,599 00
Coast and geodetic survey of the United States .....	22	651,094 71
Geological survey of the Territories .....	32	126,173 70
Lands and other property of the United States .....	12	2,405 81
Protection and improvement of Hot Springs, Arkansas .....	1	961 70
Expenses of collecting rents, Hot Springs, Arkansas .....	9	377 09
Reproducing plats of surveys, General Land Office .....	9	15,624 00
Adjusting claims for indemnity for swamp lands .....	5	12,280 55
Protection and improvement of Yellow Stone National Park .....	8	18,131 51
Commission to classify land and codify land laws .....	1	3,095 67
Depredations on public timber .....	13	85,310 25

Accounts adjusted.	Number of accounts.	Amount.
<b>DISBURSEMENTS—Continued.</b>		
Judicial expenses, embracing accounts of United States marshals, district attorneys, clerks, and commissioners, rent of court-houses, support of prisoners, &c .....	3,906	\$3,267,574 26
Prosecution of crimes .....	7	11,624 45
Suppressing counterfeiting and crime .....	27	69,308 15
Detection and prevention of frauds upon the customs revenue .....	4	22,068 18
Investigation of frauds, Office of Commissioner of Pensions .....	10	31,218 80
<b>INTEREST ACCOUNT.</b>		
Registered stock .....	43	42,589,352 04
Coin coupons .....	97	32,237,218 63
District of Columbia 3-65 bonds and water stock .....	8	740,115 18
Pacific Railroad bonds .....	25	3,665,255 36
Navy pension fund .....	1	420,000 00
Louisville and Portland Canal Company's bonds .....	4	47,490 00
<b>REDEMPTION ACCOUNT.</b>		
United States 5-20 bonds, called:		
Principal .....	17	497,310,850 00
Interest .....		10,220,170 63
United States bonds, purchased for sinking-fund:		
Principal .....	14	49,949,100 00
Interest .....		558,400 51
Premium .....		1,837,589 35
United States bonds, 10-40's for conversion:		
Principal .....	2	2,090,000 00
Interest .....		14,404 73
Premium .....		10,447 50
Refunding certificates, converted into 4-per cent. bonds:		
Principal .....	21	20,116,450 00
Interest .....		258,754 29
Coin certificates of deposit .....	13	8,771,200 00
Silver certificates of deposit .....	7	724,810 00
Currency certificates of deposit .....	14	115,690,000 00
Bonds of District of Columbia (Washington and Georgetown) .....	5	1,126,780 00
Notes, one and two years, compound interest and 7-30's:		
Principal .....	47	24,320 00
Interest .....		4,449 82
War-bounty scrip, certificate of deposit:		
Principal .....	2	225 00
Interest .....		12 20
Legal-tender notes destroyed .....	13	90,631,624 00
Fractional currency destroyed .....	13	321,075 14
Old demand notes destroyed .....	13	835 00
Refunding the national debt .....	52	850,514 19
Expenses of national currency .....	16	15,166 71
Examination of national banks and bank-plates .....	5	408 77
Transportation of United States securities .....	98	79,384 07
Judgments of the Court of Claims .....	32	232,043 53
Reporting decisions of the Court of Claims .....	1	1,000 00
Post Office Department requisitions .....	30	2,476,255 24
Outstanding drafts and checks .....	109	10,730 21
Life-saving Service .....	99	485,490 02
Life-saving Service, contingent expenses .....	115	59,941 86
Establishing life-saving stations .....	74	94,082 02
Rebuilding and improving life-saving stations .....	1	75 00
Public printing and binding .....	162	1,472,084 69
Labor and expenses of engraving and printing .....	15	886,252 04
Propagation of food-fishes .....	25	69,615 46
Illustrations for report on food-fishes .....	9	1,000 00
Inquiry respecting food-fishes .....	2	3,500 00
Steam-vessel (food-fishes) .....	2	33,372 33
Increase of Library of Congress .....	5	7,567 14
Works of art for the Capitol .....	3	6,225 00
Portraits of the Presidents .....	3	872 00
Library, Treasury Department .....	10	905 30
Pedestal for the statue of Gen. George H. Thomas .....	2	1,881 62
Construction of custom-houses .....	346	2,398,799 62
Construction of court-houses and post-offices .....	345	1,193,562 85
Construction of appraisers' stores .....	13	91,324 44
Construction of sub-treasury building, New York .....	6	10,366 28
Construction of National Museum .....	12	188,452 00
Construction of building for State, War, and Navy Departments .....	8	618,726 63
Construction of barge office, New York .....	9	47,236 98
Construction of jail for District of Columbia .....	2	431 80
Construction of assay office building .....	15	5,067 99
Construction of light-houses .....	307	435,730 08
Construction of extension of Government Printing Office .....	7	87,380 29
Construction of building for Bureau of Engraving and Printing .....	14	195,941 38
Furniture, &c., new building for Bureau of Engraving and Printing .....	1	4,994 63
Plans for public buildings .....	5	3,326 98

Accounts adjusted.	Number of accounts.	Amount.
<b>DISBURSEMENTS—Continued.</b>		
<b>REDEMPTION ACCOUNT—Continued.</b>		
.....	4	\$91,587 54
.....	6	120,542 57
.....	10	35,903 14
.....	10	67,770 86
.....	9	22,912 98
.....	34	182,861 16
.....	7	2,856 76
.....	1	4,641 48
.....	43	65,773 73
.....	8	27,915 71
.....	53	407,379 57
.....	9	5,958 27
.....	31	207,970 65
.....	8	2,190 83
.....	3	42,428 51
.....	8	44,236 84
.....	6	40,735 37
.....	30	91,213 90
.....	8	2,414 41
.....	8	29,824 79
.....	4	2,604 55
Government Printing Office and Government Printing	9	147 86
.....	6	1,818 20
Improvement and care of public grounds	6	35,094 65
Improving Capitol grounds	10	91,478 96
Improving Botanic Gardens and buildings	7	8,626 05
Improving grounds, Agricultural Department	4	6,129 12
Washington Aqueduct	4	17,182 12
Repairs of water-pipes and fire-plugs	5	2,693 56
Constructing, repairing, and maintaining bridges, District of Columbia	4	4,971 40
Removal of Bureau of Education	2	812 00
Distributing documents, Bureau of Education	7	728 50
Rearranging Court of Claims rooms in Capitol	3	1,737 18
Postage, Executive Departments	8	2,362 98
Postage, Agricultural Department	4	4,123 40
Building, Agricultural Department	2	1,500 00
Laboratory, Agricultural Department	3	1,393 43
Library, Agricultural Department	5	1,004 82
Museum, Agricultural Department	4	1,213 66
Furniture, cases, &c.	4	4,448 25
Experimental garden	4	5,634 70
Purchase and distribution of valuable seeds	5	73,283 16
Collecting agricultural statistics	4	8,143 35
Investigating diseases of swine and other domestic animals	5	5,890 10
Commission to report on depredations of Rocky Mountain locusts	8	21,444 89
Investigating the habits of insects injurious to cotton plant and agriculture	2	2,417 49
Investigating the history of insects injurious to agriculture	5	6,573 25
Investigation of epidemic diseases	1	7,998 07
Reform school, District of Columbia	4	33,445 99
Government Hospital for the Insane, buildings, &c.	7	39,414 86
Government Hospital for the Insane, current expenses	4	185,340 23
Columbia Institution for the Deaf and Dumb, buildings, &c.	1	264 57
Columbia Institution for the Deaf and Dumb, current expenses	4	37,111 07
Columbia Hospital for Women, grounds	4	1,970 10
Columbia Hospital for Women, current expenses	7	17,985 12
Howard University	2	4,129 06
Freedmen's Hospital and Asylum	10	39,396 10
Penny Lunch House	1	1,500 00
Saint Ann's Infant Asylum	2	2,494 69
Children's Hospital	5	7,307 49
National Association for the Relief of Colored Women and Children	2	2,983 18
Women's Christian Association	6	2,475 79
Industrial Home School	2	4,671 81
Maryland Institution for the Instruction of the Blind	4	5,775 00
Miscellaneous	219	204,309 96
Disbursements on transfer-warrants	238	289,524 32
<b>DISTRICT OF COLUMBIA ACCOUNTS.</b>		
Salaries and contingent expenses	202	171,965 47
Improvement and repairs	66	420,402 79
Constructing, repairing, and maintaining bridges	7	1,000 00
Transportation of paupers and prisoners	15	2,275 04
Public schools	16	386,853 17
Metropolitan police	17	299,919 23
Fire department	31	127,486 52
Courts, expenses of	29	17,564 82
Streets	100	294,240 18
Health department	19	23,829 67

Accounts adjusted.	Number of accounts.	Amount.
DISBURSEMENTS—Continued.		
DISTRICT OF COLUMBIA ACCOUNTS—Continued.		
Miscellaneous and contingent expenses .....	68	\$27,967 44
Water fund .....	20	82,110 61
Judgments.....	3	32,404 92
Support and medical treatment of the infirm poor.....	9	3,322 37
Reform School .....	8	17,637 11
Washington Asylum.....	24	43,740 48
Georgetown Almshouse .....	11	1,583 00
Hospital for the Insane .....	4	10,389 47
Children's Hospital .....	1	10,000 00
Saint Ann's Infant Asylum .....	1	5,000 00
Industrial Home School .....	1	5,000 00
National Association for Relief of Colored Women and Children.....	1	5,000 00
Workingmen's claims allowed.....	29	3,830 20
Treasurer of the United States for amount allowed to workingmen .....	1	21,155 77
Total .....	20,046	1,893,413,941 53

Number of certificates recorded.....	13,768
Number of letters recorded .....	3,443
Judiciary emolument accounts registered and referred .....	516
Number of powers of attorney for collection of interest on the public debt, examined, registered, and filed.....	3,891
Requisitions answered .....	1,023

SUMMARY STATEMENT of the WORK of the OFFICE as shown by the REPORTS of the various DIVISIONS and MISCELLANEOUS DESKS.

CUSTOMS DIVISION.

Accounts of Collectors of Customs for Receipts of Customs Revenue and Disbursements for the Expenses of Collecting the same, and also including Accounts of Collectors for Receipts and Disbursements in connection with the Revenue cutter, Steamboat, Fines, Light-house, and Marine-Hospital Services, with Accounts for Official Emoluments, Debentures, Refunds of Duties, Sales of Old Materials, and Miscellaneous Disbursements.

	No. of accounts.	Amount.
Receipts.....	6,735	\$166,258,823 96
Disbursements .....	7,173	14,162,131 32
	13,908	180,420,955 28

JUDICIARY DIVISION.

Accounts of District Attorneys, Marshals, Clerks, and Commissioners, Rents, and Miscellaneous Court Accounts.

	No. of accounts.	Amount.
Disbursements .....	3,906	\$3,267,574 36

PUBLIC DEBT DIVISION.

Accounts for Payment of Interest on the Public Debt, both Registered Stock and Coupon Bonds, Interest on District of Columbia Bonds, Pacific Railroad Bonds, Louisville and Portland Canal Bonds, Navy Pension Fund, Redemption of United States and District of Columbia Bonds, Redemption of Coin and Currency Certificates, Old Notes and Bounty Scrip, and Accounts for Notes and Fractional Currency Destroyed.

	No. of accounts.	Amount.
Interest accounts.....	178	\$79,699,431 23
Redemption accounts.....	181	799,661,448 17
	359	879,360,879 40



WAREHOUSE AND BOND DIVISION.

STATEMENT of TRANSACTIONS in BONDED MERCHANDISE, as shown by WAREHOUSE and BOND ACCOUNTS ADJUSTED during the fiscal year ending June 30, 1880.

Number of accounts adjusted..... 813  
Number of reports of "no transactions" received, examined, and referred..... 529

Balance of duties on merchandise in warehouse per last report..... \$13,711,864 28  
Duties on merchandise warehoused ..... 54,203,099 40  
Duties on merchandise rewarehoused..... 1,396,477 00  
Duties on merchandise constructively warehoused ..... 12,513,146 66  
Increased and additional duties, &c..... 1,400,728 61  
  
Total .....83,225,315, 95

Contra:

Duties on merchandise withdrawn for consumption..... \$49,833,561 36  
Duties on merchandise withdrawn for transportation ..... 3,310,275 67  
Duties on merchandise withdrawn for exportation..... 11,997,258 41  
Allowances for deficiencies; damage, &c ..... 2,208,194 36  
Duties on withdrawals for construction and repair of vessels..... 86,491 94  
Duties on bonds delivered to district attorneys for prosecution..... 34,403 64  
Balance of duties on merchandise in warehouse ..... 15,755,130 57  
  
Total ..... 83,225,315 95

MISCELLANEOUS DESKS.

No. 1.—Accounts of Disbursing Clerks of the Departments for Salaries, Salary Accounts of the various Assistant Treasurers, and of the Congressional Library, Public Printer, and Executive Office, Accounts for Salaries of the Officers and Employés, House of Representatives, and the Accounts relating to the Coast Survey.

	No. of accounts.	Amount.
Disbursements .....	411	\$6,768,937 91

No. 2.—Accounts of the Disbursing Clerks of the Departments for Contingent Expenses, Contingent Expenses of the House of Representatives and Assistant Treasurers, Accounts of the Bureau of Engraving and Printing, Geological Survey, National Board of Health, Reform School, New Building for State, War, and Navy Departments, and a very great number of Miscellaneous Accounts. The Accounts on this desk during the last fiscal year covered one hundred and seventy different appropriations.

	No. of accounts.	Amount.
Receipts.....	9	\$1,903 36
Disbursements .....	1,133	4,976,076 24
	1,142	4,977,979 60

No. 3.—Accounts for Construction of Custom-Houses, Post-Offices, Court-Houses, and other Public Buildings; Accounts of Light-House Engineers and Inspectors; Accounts of the Public Printer; Steamboat Inspection and Life-Saving Service; the Accounts of the Government Hospital for the Insane, Columbia Hospital for Deaf and Dumb, and many charitable institutions.

	No. of accounts.	Amount.
Receipts.....	19	\$115,774 21
Disbursements.....	3,379	10,664,079 25
	3,398	10,779,853 46

No. 4.—*Account of the Treasurer of the United States for General Expenditures; the Salary and Mileage Accounts for the Senate and House of Representatives, and the Accounts for Contingent Expenses of the United States Senate.*

	No. of accounts.	Amount.
Receipts.....	3	\$906, 351, 686 31
Disbursements.....	58	834, 814, 832 49
	61	1, 741, 166, 518 80

No. 5.—*Accounts of Mints and Assay Offices; Salaries of the Civil List paid directly from the Treasury on First Auditor's Certificates, Captured and Abandoned Property Accounts, and Accounts for the Legislative and Contingent Expenses of the United States Territories.*

	No. of accounts.	Amount.
Receipts.....	31	\$133, 289, 717 56
Disbursements.....	1, 558	133, 750, 060 17
	1, 589	267, 039, 777 72

No. 6.—*Accounts of the District of Columbia, and Accounts under the act for the Relief of Workingmen under the late Board of Public Works.*

	No. of accounts.	Amount.
Disbursements.....	686	\$1, 991, 237 81

No. 7.—*Under the Chief of the Warehouse and Bond Division, and comprising Judgments of the Court of Claims, Outstanding Liabilities, Postal Requisitions, Transportation of United States Securities, Transfer of Appropriations, &c.*

	No. of accounts.	Amount.
Receipts.....	238	\$280, 524 32
Disbursements.....	1, 343	3, 658, 132 56
	1, 621	3, 938, 656 90

In submitting the foregoing exhibits, showing the official labor performed in this office during the last fiscal year, I desire to call attention to the fact that the number of accounts examined and adjusted, and the amount of money involved in their settlement, are without precedent in the history of this bureau.

It will be observed that the number of accounts adjusted for the year was 27,081, and the amount of money involved, as per vouchers examined, was \$3,099,712,371.24, which is over one thousand millions of dollars in excess of the national debt during the same time.

The amounts of accounts examined during the last four years are over nine thousand millions of dollars, making an average of more than two thousand millions of dollars in yearly settlements made in this office.

The following table, showing the comparative labor performed annually in the First Auditor's Office since 1860, will more fully illustrate what is here stated relating to the present labor and official responsibility compared with former years.



An examination of the foregoing table will show that the labor and official responsibility has increased in this office three hundred per cent. since 1861. This increase will doubtless continue in the future, yet in a less ratio perhaps, growing out of the fact that all public accounts, except those specially assigned by statutes to other accounting officers, are referred to this office for examination and adjustment; and for the further reason that, with the increase of population, and of organized States and Territories, the Treasury Department will of necessity be required to adjust and pay a larger number of accounts that will be filed for settlement. This table clearly shows the necessity for the additional clerical force in this bureau heretofore recommended by me, and which was granted by act of Congress approved June 15, 1880.

While the labor required of the office had increased three hundred per cent. over that of 1861, the clerical force had not been increased over one hundred per cent., and this compelled a constant detail of clerks for special duty in the office in order that the public business might be dispatched without embarrassment.

Attention is called to the number of accounts and the amounts involved in the settlement of what are known as "miscellaneous accounts," under the designation of "miscellaneous desks," from No. 1 to 7 inclusive. These embrace the largest part of the disbursements from the United States Treasury during the year, yet their examination is not under the supervision of a chief of division, as they do not belong to any class pertaining to divisions of the First Auditor's Office as now organized.

I would respectfully recommend that a new division be organized, to be known as the Division of Miscellaneous Accounts, to which should be referred all accounts not now assignable to existing divisions in this office.

While the accounts settled upon these desks are now carefully and critically examined by clerks in charge who would be a credit and honor to any office, for I except none, as to diligence, efficiency, and integrity, this will secure a supervision of the accounts stated by them, which will be an additional guarantee of their correct adjustment. In cases of enforced absence of clerks from duty on account of sickness or otherwise, the work of the new division will proceed with less embarrassment under the charge of an efficient chief.

Renewing my former commendations of the deputy auditor, chiefs of divisions, and clerks and employes of the office for faithful and intelligent performance of duty,

I am, sir, most respectfully, your obedient servant,

R. M. REYNOLDS,  
*First Auditor.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

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## REPORT OF THE SECOND AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
SECOND AUDITOR'S OFFICE,  
*Washington, September 30, 1880.*

SIR: In accordance with section 283 of the Revised Statutes, and your request of the 13th instant, I have the honor to submit my report of the business assigned to this office for the fiscal year ending June 30, 1880.

BOOKKEEPERS' DIVISION.

The application of money appropriated for the War Department and Indian service is shown by the following condensed balance sheet of appropriations:

	War.	Indian.
CREDITS.		
Balance to the credit of all appropriations on the books of this office, July 1, 1879.....	\$1, 804, 873 55	\$5, 018, 999 73
Amount of repayments during the year .....	1, 019, 259 91	326, 114 53
Amount repaid through the Third Auditor's Office to the appropriation for "Clothing, Camp and Garrison Equipage" .....	86, 155 40	.....
Amount credited by warrants issued to adjust appropriations under section 5, act March 3, 1875, and by other counter warrants .....	1, 081 00	1, 349, 016 69
Amount of annual, permanent, and specific appropriations made by law .....	16, 613, 336 22	6, 910, 577 07
Total credits.....	19, 524, 706 68	12, 603, 708 02
DEBITS.		
Amounts paid out on requisitions issued by the Secretary of War, and charged as follows:		
To appropriations of the Pay Department .....	12, 680, 861 29	.....
To appropriations of the Ordnance Department.....	1, 586, 528 64	.....
To appropriations of the Medical Department .....	276, 361 91	.....
To appropriations of the Adjutant-General's Department.....	71, 748 95	.....
To appropriations under the immediate control of the Secretary of War .....	98, 051 52	.....
To the appropriation for the Commanding General's Office.....	3, 622 53	.....
To the Soldiers' Home .....	103, 987 18	.....
To the National Home for Disabled Volunteer Soldiers .....	880, 000 00	.....
To special acts of relief.....	5, 452 64	.....
Amount drawn through the Third Auditor's Office from the appropriation for "Clothing, Camp and Garrison Equipage".....	1, 068, 537 29	.....
Amount paid out on requisitions issued by the Secretary of the Interior .....	.....	6, 271, 506 15
Amount charged by warrants issued to adjust appropriations and by other transfer warrants .....	1, 313 96	1, 349, 016 69
Amount carried to the surplus fund under section 3691, Revised Statutes.....	963, 871 23	527, 466 55
Total debits.....	17, 740, 337 14	8, 147, 989 90
Balance remaining to the credit of all appropriations on the books of this office June 30, 1880.....	1, 784, 369 54	5, 455, 718 63

The number of requisitions registered, journalized, and posted was 5,119, namely: War, 1,260 debit and 508 credit; Interior, 3,135 debit and 216 credit. Twenty-nine miscellaneous settlements, involving \$224,403.10, were made in this division; 1,170 certificates of deposit were listed; 546 repay requisitions were prepared for the War and Interior Departments; 53 official bonds of disbursing officers were recorded; 370 certificates of non-indebtedness were issued, and 26 special reports were made in reply to inquiries from committees of Congress and individual Senators and Representatives. A statement was prepared, showing the expenditures on account of the War of the Rebellion chargeable to appropriations on the books of this office. The amount disbursed on account of said war up to June 30, 1879, was ascertained to be \$1,558,138,343.88.

The following settlements confirmed by the Second Comptroller were entered and posted:

Disbursing accounts: Army officers', 243; Indian agents', 227 .....	470
Claims: War, 331; Indian, 2,337 .....	2, 668
Special settlements connected with overpayments, refundments, removal of suspensions, &c.....	426
Miscellaneous.....	148
Total .....	3, 712



## PAYMASTERS' DIVISION.

Paymasters' accounts on hand unexamined July 1, 1879 .....	154
Received during the year .....	516
<b>Total</b> .....	<b>670</b>
Audited and reported to the Second Comptroller .....	540
<b>On hand, unexamined, June 30, 1880</b> .....	<b>130</b>

The amount involved in the 540 audited accounts, and in 294 miscellaneous settlements, was \$12,110,035.15, as follows :

Disbursements by paymasters .....	\$11,854,187 21
Fines and stoppages paid to the Soldiers' Home .....	110,386 20
Transfers to the Third Auditor's books on account of tobacco sold to soldiers, \$118,156.55; and on account of stoppages for subsistence and quartermaster's stores, \$5,371.52 .....	123,528 07
Charges to officers and men of the Army and late volunteer forces on account of overpayments .....	7,726 38
Amount of overpayments refunded .....	5,245 59
Sundry charges and credits .....	8,961 70
<b>Total</b> .....	<b>12,110,035 15</b>

The accounts of seventeen paymasters were finally adjusted during the year, showing balances due the United States amounting to \$12,645.10; of which \$9,622.46 has been collected and deposited in the Treasury. From the record of deposits by enlisted men under the act of May 15, 1872, kept in this division, it appears that the sum of \$343,381.95 was deposited with paymasters whose accounts have been audited during the year; and that \$250,725.78 was returned to the depositors. Under the act of June 18, 1878, which authorizes officers of the Army to count service as enlisted men in making up their longevity record, one hundred and ten records have been examined and revised, in order to determine from what date the officers interested are entitled to increased pay for length of service.

## MISCELLANEOUS DIVISION.

There were 1,865 accounts examined in this division during the year, in which disbursements aggregating \$3,890,788.07 were passed to the credit of the officers concerned, under the following heads of appropriations:

Ordnance, ordnance stores and supplies, armament of fortifications, manufacture of arms, arming and equipping the militia, ordnance service, repairs of arsenals, and other appropriations of the Ordnance Department .....	\$1,484,230 92
Medical and hospital department, artificial limbs and appliances, Medical and Surgical History of the War of the Rebellion, Army medical museum, and other appropriations of the Medical Department .....	142,670 24
Recruiting, including \$159,126.88 allowed on the adjustment of volunteer recruiting accounts .....	235,555 07
National Home for Disabled Volunteer Soldiers .....	1,819,416 84
Contingencies of the Army, expenses of military convicts, publication of official records of the War of the Rebellion, and other appropriations under the control of the Secretary of War .....	87,837 83
Arrears of pay and bounty due colored soldiers .....	87,855 50
Miscellaneous .....	33,221 67
<b>Total disbursements</b> .....	<b>3,890,788 07</b>
Accounts on hand July 1, 1879 .....	481
Received during the year .....	1,830
<b>Total</b> .....	<b>2,311</b>
Accounts examined during the year .....	1,865
<b>Remaining on hand June 30, 1880</b> .....	<b>446</b>

The clerks engaged in recording payments to officers of the Regular Army and volunteer forces have examined and entered 100,247 vouchers, discovering, incidentally, thirty cases of double payment, which have been reported for appropriate action.

It is suggested that Congress be asked to amend the act of March 3, 1875 (18 Statutes, 360), so as to require the fiscal officer of the National Home for Disabled Volunteer Soldiers to give a bond to the United States in such sum as the President of the United States may deem proper, said bond to be approved by the Secretary of War, and be subject to the provisions of sections 1192 and 3639, Revised Statutes. Under existing laws the moneys appropriated for the support of the National Home are placed to the credit of the fiscal officer of that institution with a designated depository of the United States, in the same manner that other public moneys are advanced to disbursing officers of the War Department. The act of March 3, 1875, requires that the managers of the Home shall render to the Secretary of War accounts of all their receipts and expenditures, and that such accounts shall be audited and allowed, as required by law for the general appropriations and expenditures of the War Department. Until the accounts are so audited and allowed the fiscal officer of the Home is a debtor to the United States on the books of this office for advances made to him without the security ordinarily demanded of officers who are intrusted with the disbursement of public funds. For this reason I think he should give a bond to the United States. At the same time I disclaim any reflection on the past or present officers of the National Home.

#### INDIAN DIVISION.

Last year's report showed that, in consequence of a large increase in the number of accounts and claims presented for adjustment, the work of this division had fallen in arrear. Additional clerical force was assigned to it as early as practicable, and the number of accounts on hand has been materially lessened.

The greater portion of the money appropriated by Congress for the Indian service is now paid directly from the Treasury, on requisitions issued by the Secretary of the Interior, based upon accounts stated by the Second Auditor and certified by the Second Comptroller. Formerly the bulk of the money was advanced to Indian agents for disbursement. Accounts for Indian supplies, &c., were then paid first and audited afterwards. Now they are audited prior to payment. This method undoubtedly has its advantages, but it is also open to objections, one of which is that it throws upon the Treasury Department the labor of paying by draft numerous claims for comparatively insignificant amounts that might be paid more promptly and with less expense to the government by the bonded disbursing officers of the Indian service. During the last fiscal year one hundred and six claims of \$5 each or less, and four hundred and thirty-five for sums varying from \$5 to \$25, have been paid by draft. The weight of the objection here suggested will be appreciated when it is stated that a claim for 50 cents must pass through the same channels and undergo the same manipulation as one for \$50,000, and, in its progress through the Interior and Treasury Departments, must pass through the hands of nearly fifty persons, including two heads of departments, one Assistant Secretary, two members of the Board of Indian Commissioners, six heads of bureaus, and eight chief clerks and chiefs of division.

To show how the business of this office has been affected by the change

in the method of disbursing Indian appropriations, I append a statement of the number of claims settled and requisitions issued since July 1, 1869, from which it will be seen that, while in 1880 there were five and one-half times as many claims and six times as many requisitions as in 1869, the increase in the amount involved is only 50 per cent.

Fiscal year.	Claims settled.	Requisitions issued.	Amount.
1869 .....	584	560	\$2, 730, 539 75
1870 .....	635	625	1, 307, 083 96
1871 .....	962	1, 006	2, 973, 705 72
1872 .....	996	977	3, 108, 160 49
1873 .....	984	1, 386	4, 730, 749 34
1874 .....	1, 101	1, 482	3, 050, 552 94
1875 .....	1, 678	1, 867	4, 422, 865 55
1876 .....	1, 236	1, 488	3, 556, 260 38
1877 .....	2, 248	2, 194	3, 575, 041 22
1878 .....	2, 060	2, 873	3, 898, 813 00
1879 .....	2, 037	3, 019	3, 795, 366 05
1880 .....	3, 220	3, 351	4, 146, 681 39

The accounts and claims received, adjusted, and remaining on hand during the last fiscal year are shown by the following statement:

	On hand July 1, 1879.	Received during the year.	Examined and disposed of.	Remaining on hand June 30, 1880.	Amount of disbursements.
Money accounts of Indian agents .....	451	673	781	343	\$1, 513, 548 27
Property accounts of Indian agents .....	352	330	333	349	.....
Claims of contractors, employes, &c.....	393	2, 975	3, 220	148	4, 146, 681 39
Total disbursements .....	.....	.....	.....	.....	5, 660, 229 66

It is proper to remark that the 148 claims remaining unexamined belong to a large class of outstanding claims that accrued between 1873 and 1876, chargeable to appropriations that have been exhausted or carried to the surplus fund, and that they cannot be paid until Congress shall have provided the necessary funds.

Forty-one transcripts of accounts of Indian agents, no longer in the service, have been prepared for suit, and the sum of \$25,556.82 has been recovered by suit and otherwise and covered into the Treasury.

PAY AND BOUNTY DIVISION.

The work of this division is exhibited in the subjoined tabular statements of claims examined and claims settled. When claims for arrears of pay and bounty are presented to the office, it is the duty of the "Examining Branch" of this division to ascertain whether or not they have already been paid or rejected, and to see that all the evidence required by law and regulation is filed by the claimant or his attorney. The "Settling Branch" deals only with claims that have been reported by the Examining Branch as technically correct and ready for adjustment.

Examining Branch.

Class of claims.	Original claims.					Suspended claims.					Letters written.
	Number examined.	Number found correct.	Number found incomplete and suspended.	Number rejected.	Number of duplicate applications found.	Number examined.	Number completed by additional evidence.	Number again suspended—additional evidence insufficient.	Number rejected.	Total number examined.	
<i>White soldiers.</i>											
Arrears of pay, original bounty, and bounty under act of April 22, 1872.....	10,810	4	10,691	109	6	17,821	1,170	11,704	4,947	28,631	51,233
Additional bounty, act July 28, 1866.....	2,599	.....	2,506	32	61	6,178	595	4,354	1,229	8,777	13,580
Mexican war claims, three months' extra pay, act February 19, 1879.....	781	.....	301	390	.....	840	33	496	311	1,621	4,464
<i>Colored soldiers.</i>											
Arrears of pay and all bounties .....	2,114	1	2,090	9	5	12,084	396	10,368	1,320	14,198	21,277
Total.....	16,304	5	15,687	540	72	36,923	2,194	26,922	7,807	53,227	90,563

Settling Branch.

Class of claims.	Number of claims.				Letters written.	Certificates issued..	Amount involved.
	Received.	Allowed.	Rejected.	Total disposed of.			
<i>White soldiers.</i>							
Arrears of pay, original bounty and bounty under act April 22, 1872 .....	15,830	1,642	6,824	8,466	.....	.....	\$178,991 91
Additional bounty, act July 28, 1866 .....	1,658	975	996	1,971	.....	.....	99,620 10
Mexican war claims, three months' extra pay, act February 19, 1879 .....	1,300	167	1,565	1,732	.....	.....	4,860 56
<i>Colored soldiers.</i>							
Arrears of pay and all bounties .....	6,329	1,520	2,119	3,648	.....	.....	139,551 68
Total.....	25,117	4,313	11,504	15,817	17,939	3,692	423,033 25

In addition to the settlements reported above, one was made for \$5,006.13 in favor of the Soldiers' Home, under section 4818, Revised Statutes, on account of unclaimed arrears of pay due deceased soldiers of the United States Army.

The total number of claims remaining on hand June 30, 1880, was 29,470, namely:

Arrears of pay and bounty to white soldiers.....	17,164
Additional bounty, under the act of July 28, 1866.....	2,625
Arrears of pay and bounty to colored soldiers .....	9,523
Three months' extra pay to soldiers who served in the war with Mexico, act February 19, 1879 .....	158
Total .....	29,470

It will be observed that comparatively few of the claims for three months' extra pay to soldiers of the Mexican war, so far presented, have been allowed. The whole number filed up to June 30, 1880, was 3,963, of which only 167 have been paid, while 3,638 were rejected, and 158 remain on hand for adjustment. The time for filing claims for additional bounty, under the act of July 28, 1866, expired on June 30th last. Many claimants do not appear to be aware of this, although the fact has been repeatedly published. Claims continue to be presented, but as the accounting officers cannot entertain them, they are at once returned to the claimants. Unless the time for filing this class of claims be further extended by Congress, I anticipate that the next annual report will show that all have been disposed of.

## DIVISION FOR THE INVESTIGATION OF FRAUD.

During the year, 8,722 cases were before this division for examination and investigation. Of these, 4,639 were examined and partially investigated, 332 were finally disposed of, and 8,390 cases remain on hand for further consideration. Abstracts of facts were made in 547 cases; 69 were transmitted to the Department of Justice for suit and criminal prosecution, and 4,900 letters were written. These cases comprise such claims presented on account of military service to the United States as involve apparent, alleged, and suspected fraud in their prosecution and collection, unlawful withholding of money from claimants, forgery, criminal personation of soldiers and their heirs, difficult identification, over-payments and double payments of officers and enlisted men, conflicting testimony, contested heirship, &c., and are as follows:

Unsettled cases of 1,000 white and 1,574 colored soldiers, and cases of 1,900 white and 3,517 colored soldiers in which notice of fraud or wrong was not presented until after settlement of the claims.

The amount recovered by suit and otherwise and returned to the Treasury was \$4,696.17; amount of judgments recovered, but not yet satisfied, \$375.22; amount secured to claimants from parties unlawfully withholding, \$1,741.22; and amount returned to the Treasury by the paymaster having charge of the business of the late freedmen's branch of the Adjutant General's Office, \$27,219.41.

I respectfully invite your attention to the urgent necessity of some action on the part of Congress with regard to the claims of colored soldiers and their heirs, to which special reference was made in the annual reports for 1875, 1876, 1877, 1878, and 1879. The case was succinctly stated in last year's report as follows:

Many colored soldiers now living, and the heirs of others who were killed in the military service, are clamorous for the pay and bounty which they claim to have been defrauded of under the regime of the Freedmen's Bureau. The accounting officers of the Treasury Department, to whom their reiterated applications are made, are powerless to afford them any satisfaction.

## PROPERTY DIVISION.

Property returns (clothing, camp and garrison equipage) on hand July 1, 1879 .....	7,776	
Received during the year .....	3,817	
		11,593
Settled during the year .....		4,032
Property returns unsettled June 30, 1880 .....	7,561	

The sum of \$1,204.89 has been charged to officers for property not accounted for, \$365.36 has been recovered, and 342 certificates of non-indebtedness have been issued to officers no longer in the service.



## DIVISION OF INQUIRIES AND REPLIES.

The records of this division show that 5,467 inquiries remained unanswered on July 1, 1879; that 9,665 have been received since that date; and that 10,360 replies, containing information of a varied character, have been made to inquiries from the Adjutant-General, Quartermaster-General, Commissary-General, Chief of Ordnance, Commissioner of Pensions, and the Third and Fourth Auditors. There are 4,772 inquiries awaiting attention, the major part of which are from the Adjutant-General. The following miscellaneous work has been performed:

Rolls and vouchers copied for the Adjutant-General (414) and for the Department of Justice (50).....	464
Miscellaneous papers copied, namely, affidavits, final statements, certificates of disability, letters, furloughs, &c .....	2,367
Signatures on claims, &c., compared with signatures on muster and pay rolls, vouchers, &c .....	3,831
Descriptive lists briefed and filed away .....	13,965
Overpayments and double payments discovered, amounting to .....	\$22,436 48
Amount recovered in satisfaction of charges raised against officers and enlisted men at the instance of this division .....	2,066 18

## DIVISION OF CORRESPONDENCE AND RECORDS.

Letters received, 37,116; written, 32,258; referred to other offices, having been sent here in error, 2,145; recorded and indexed, 984; dead letters received and registered, 1,824; claims received, briefed, and registered, 30,602; miscellaneous vouchers received, stamped, and distributed, 49,743; letters containing additional evidence to perfect suspended claims briefed and registered, 18,080; pay and bounty certificates examined, registered, and mailed, 4,591; pay and bounty certificates examined, registered, and sent to the pay department, 3,692; reports calling for requisitions sent to the Secretary of War, 452; miscellaneous cases disposed of, 3,864.

## ARCHIVES DIVISION.

Paymasters' accounts received from the Pay Department to be audited.....	516
Confirmed settlements received from the Second Comptroller, entered, indexed, and placed in permanent files: Paymasters', 161 Indian, 2,591; miscellaneous, 603.....	3,360
Miscellaneous accounts withdrawn and returned to files.....	1,807
Vouchers withdrawn from files for reference in the settlement of accounts and claims .....	31,829
Vouchers returned to files.....	49,338
Vouchers briefed.....	127,976
Mutilated rolls repaired .....	21,365

## RECAPITULATION.

Number of accounts and claims, of all kinds, on hand unexamined July 1, 1879 .....	29,777
Number received during the year .....	35,258
Total .....	65,035
Number adjusted during the year.....	26,588
Number of accounts and claims, of all kinds, remaining on hand June 30, 1880.	38,447

Amount drawn out of the Treasury by requisitions on account of claims allowed, and advances made to disbursing officers, \$20,633,746.37.

Amount involved in claims and disbursing accounts audited and adjusted during the year, \$22,057,617.42.

Total number of letters written, 162,828.

Average number of clerks employed, 136.

As will be seen by the foregoing recapitulation, there were 38,447 un-

settled accounts on hand June 30, 1880, against 29,777 on July 1, 1879, an increase of 8,670, as follows:

Increase in number of unsettled claims for back pay and bounty .....	9,300
Decrease in number of unsettled accounts of all other classes.....	630
	<hr/>
Net increase in number of unsettled cases .....	8,670

The accumulation of unsettled claims for arrears of pay and bounty is due to insufficient clerical force and peculiarities in the character of the claims presented. The first of these causes has been in a measure removed by an addition to the force of the office, which has enabled me to place more clerks in the Bounty Division, with a view of bringing the work up to date as early as possible; but the difficulties attending the adjustment of these claims increase rather than diminish. Questions of law and fact, heirship, identity, &c., now arise that were comparatively unknown when the claims accrued, and call for an amount of careful investigation and tedious correspondence not required ten years ago.

Very respectfully,

O. FERRISS, Auditor.

Hon: JOHN SHERMAN,  
Secretary of the Treasury.

REPORT OF THE THIRD AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
THIRD AUDITOR'S OFFICE,  
Washington, October 25, 1880.

SIR: I have the honor to transmit herewith report of the operations of this office for the fiscal year ended June 30, 1880. The following statement shows, in tabular form, the number and amount of accounts and claims received and audited, and the number and amount of accounts and claims remaining unsettled at that date, viz:

Description of accounts.	Number of accounts re- maining on hand June 30, 1879.	Number of accounts re- ceived in fiscal year ended June 30, 1880.	Number of accounts set- tled in fiscal year ended June 30, 1880.		Number of accounts un- settled June 30, 1880.	
	Monthly and quar- terly.	Monthly and quar- terly.	Monthly and quar- terly.	Amount in- volved.	Monthly and quar- terly.	Amount in- volved.
Quartermasters' money .....	558	3,017	2,739	\$11,824,068 66	836	\$2,144,673 26
Quartermasters' property .....	220	4,094	3,762	.....	552	.....
Commissaries' money .....	625	1,687	1,872	2,790,182 60	440	543,774 26
Pension agents' money .....	89	547	277	31,169,748 01	359	42,115,488 37
Engineers' money .....	33	189	186	7,014,215 22	36	2,470,226 88
Signal officers' money .....	50	155	89	160,903 94	116	571,655 78
Signal officers' property .....	179	701	758	.....	122	.....
Claims for horses lost .....	5,196	323	617	125,114 57	4,902	891,715 12
Claims for steamboats de- stroyed .....	73	1	1	1,500 60	73	727,378 87
Oregon war claims .....	710	56	59	7,468 75	707	882 44
Miscellaneous claims .....	12,674	2,946	2,607	3,349,000 96	13,013	8,175,232 09
State war claims .....	9	2	3	487,131 22	8	4,096,750 33
Total .....	20,416	13,718	12,970	56,929,333 93	21,164	61,737,777 40

## BOOKKEEPERS' DIVISION.

	Advances to officers and agents during the fiscal year.	Claims paid during the fiscal year.	Transfers not involving an expenditure from the Treasury.	Special reliefs.	Total.
Number of requisitions drawn by the Secretaries of War and Interior on the Secretary of the Treasury in favor of sundry persons, 2,894, amounting to \$78,445,629.86, paid out of the following appropriations:					
Regular supplies, Q. M. D .....	\$3,321,030 87	\$21,909 81	\$503 04		\$3,343,503 72
Incidental expenses, Q. M. D .....	957,160 09	4,364 24	20,740 53		982,264 86
Barracks and quarters, Q. M. D .....	871,759 09	4,219 42	7,212 39		883,190 90
Army transportation .....	4,203,546 11	890,107 36	3,904 61		5,103,618 08
Clothing, camp, and garrison equipage .....	1,064,157 41	4,379 88			1,068,537 29
National cemeteries .....	109,029 08	48 74			109,077 82
Pay of superintendents of national cemeteries .....	58,775 04				58,775 04
Construction and repair of hospitals ..	75,540 27				75,540 27
Observation and report of storms .....	375,039 06				375,039 06
Claims for quartermasters' stores and commissary supplies, &c. ....		2,231 92			2,231 92
Cavalry and artillery horses .....	198,965 72	625 00			199,590 72
Miscellaneous claims audited by Third Auditor .....		989 54			989 54
Constructing jetties, &c., at South Pass, Mississippi River .....		1,100,000 00			1,100,000 00
Repair of road between Fortress Monroe and Mill Creek .....	6,500 00				6,500 00
Telegraphic cable from main land, in Rhode Island, to Block Island .....	15,000 00				15,000 00
Fifty per cent. of arrears of Army transportation due land-grant railroads, act March 3, 1879 .....		285,554 09			285,554 09
Claims of loyal citizens for supplies furnished, &c. ....		645 40			645 40
Buildings for military quarters at Fort Snelling, Minn .....	25,000 00				25,000 00
Rebuilding officers' quarters at Madison barracks, Sacket's Harbor .....	25,000 00				25,000 00
Headstones for graves of soldiers in private cemeteries .....	30,000 00				30,000 00
Military road from Alamosa, Colo., to Pagosa Springs .....	10,000 00				10,000 00
Military post near Niobrara River, Northern Nebraska or Dakota .....	50,000 00				50,000 00
Signal Service .....	10,501 06				10,501 06
Construction, maintenance, and repair of military telegraph lines .....	50,000 00				50,000 00
Erection of barracks at Fortress Monroe, Va .....	34,000 00				34,000 00
Extension of military telegraph lines from Fort Elliott .....	20,000 00				20,000 00
Extension of military telegraph lines, via Newport, on Mill Creek .....	20,000 00				20,000 00
Military road from Ojo Caliente, New Mexico, to Pagosa Springs .....	5,000 00				5,000 00
Military road from Scottsburg to Camp Stewart, Oreg .....	5,000 00				5,000 00
Military post at El Paso, Tex .....	40,000 00				40,000 00
Military post near Pagosa Springs, Colo .....	40,000 00				40,000 00
Removing remains of officers to national cemeteries .....	300 00				300 00
Refunding to States for expenses incurred, &c. ....		8,513 06			8,513 06
Removing remains of W. E. English, lieutenant Seventh Infantry, U. S. A ..	300 00				300 00
Payment to State of Tennessee for keeping, &c., United States prisoners ..		5,400 69			5,400 69
Engineer appropriations .....	7,240,809 25	101,596 01			7,351,405 26
Subsistence of the Army .....	2,389,481 86	3,985 36	2,697 39		2,396,164 61
Support of military prison at Fort Leavenworth, Kans .....	67,440 00				67,440 00
Lost horses, &c., act March 3, 1849 .....		111,225 51	6,976 71		118,202 22
Army pensions .....	54,481,808 02	2,533 34	9,212 50		54,493,553 86
Commutation of rations to prisoners of war, &c. ....		7 88			7 88

	Advances to officers and agents during the fiscal year	Claims paid during the fiscal year.	Transfers not involving an expenditure from the Treasury.	Special refunds.	Total.
Relief of board of trustees of Antietam national cemetery .....				\$13,223 41	\$13,223 41
Relief of John N. Reed .....				4,124 50	4,124 50
Relief of personal representative of M. G. Harman .....				354 00	354 00
Relief of the families of the men who perished on the United States dredge-boat McAlister .....				1,080 00	1,080 00
Relief of Michael Granery, Nicholas Wax, and Moleere Lange .....				1,500 00	1,500 00
Purchase of cemetery grounds near Columbus, Ohio .....		\$500 00			500 00
Total .....	\$1			91	78,445,029 80

The number of credit and counter requisitions drawn by the Secretaries of War and Interior on sundry persons in favor of the Treasurer of the United States is 1,170, on which repayments into the Treasury have been made through the Third Auditor's Office, during the fiscal year ended June 30, 1880:

Deposits .....	\$1,811,469 28
Transfer accounts .....	127,200 40
Total .....	1,938,669 68

## QUARTERMASTERS' DIVISION.

	Money accounts.		Property returns.	Supplemental settlements.	
	Number.	Amount involved.		Money.	Amount involved.
On hand per last report .....	558	\$1,800,008 67	220		
Received during the fiscal year .....	3,017	12,168,673 25	4,094	300	\$105,909 30
Total .....	3,575	13,968,741 92	4,314	300	105,909 30
Reported during the fiscal year .....	2,739	11,824,068 66	3,702	300	105,909 30
Remaining unsettled .....	836	2,144,673 26	562		
Total .....	3,575	13,968,741 92	4,314	300	105,909 30

	Signal accounts.			Total.	
	Property.	Money.	Amount involved.	Number.	Amount involved.
On hand per last report .....	170	50	\$143,772 13	1,007	\$1,943,840 80
Received during the fiscal year .....	701	135	588,787 50	8,267	12,603,370 23
Total .....	870	205	732,559 72	9,274	14,807,211 03
Reported during the fiscal year .....	758	89	100,003 94	7,618	12,090,881 99
Remaining unsettled .....	122	116	571,635 78	1,626	2,716,329 04
Total .....	880	205	732,559 72	9,274	14,807,211 03

Number of letters written, 5,417; number of clerks employed, 18; number of vouchers examined, 239,767; number of pages of manuscript written, 10,012

PAPERS ACCOMPANYING THE

SUBSISTENCE DIVISION.

The transactions of the subsistence and engineer branches for the fiscal year are shown by the following statement, viz :

	Subsistence accounts.		Engineer accounts.	
	Number.	Amount in- volved.	Number.	Amount in- volved.
On hand per last report, June, 30, 1879.....	625	\$823, 183 14	33	\$2, 342, 074 34
Received during the fiscal year.....	1, 687	2, 510, 773 72	189	7, 142, 367 76
Total .....	2, 312	3, 333, 956 86	222	9, 484, 442 10
Reported during the fiscal year .....	1, 872	2, 790, 182 60	186	7, 014, 215 22
Remaining on hand June 30, 1880.....	440	543, 774 26	36	2, 470, 226 88

Number of vouchers examined, 138,851; number of letters written, 1,873; number of difference sheets written, 1,021; number of calls answered, 642; number of clerks employed, 9.

MISCELLANEOUS CLAIMS DIVISION.

	Number.	Amount claimed.	Amount allowed.
On hand July 1, 1879.....	12, 674	a\$8, 427, 840 54	.....
Received during the year.....	2, 946	b3, 096, 392 51	.....
Total .....	15, 620	11, 524, 233 05	.....
Disposed of during the year.....	2, 607	c3, 349, 000 96	\$2, 690, 525 89
On hand July 1, 1880.....	13, 013	d8, 175, 232 09	.....

	Oregon and Washington In- dian war claims 1855-'56.			Lost vessels, &c., act of March 3, 1849.		
	Num- ber.	Amount claimed.	Amount allowed.	Num- ber.	Amount claimed.	Amount allowed.
On hand July 1, 1879 .....	710	e\$5, 499 69	.....	73	\$727, 378 87	.....
Received during the year .....	56	f3, 351 50	.....	1	1, 500 00	.....
Total .....	766	8, 851 19	.....	74	728, 878 87	.....
Disposed of during the year .....	59	g7, 968 75	\$5, 484 18	1	1, 500 00	\$800 00
On hand July 1, 1880.....	707	h882 44	.....	73	727, 378 87	.....

- a This is the amount claimed in 11,142 cases, the amount claimed in the other 1,532 cases not being stated.
- b This is the amount claimed in 2,701 cases, the amount claimed in the other 245 cases not being stated.
- c This is the amount claimed in 2,433 cases, the amount claimed in the other 174 cases not being stated.
- d This is the amount claimed in 11,410 cases, the amount claimed in the other 1,603 cases not being stated.
- e This is the amount claimed in 345 cases, the amount claimed in the other 365 cases not being stated.
- f This is the amount claimed in 21 cases, the amount claimed in the other 35 cases not being stated.
- g This is the amount claimed in 28 cases, the amount claimed in the other 31 cases not being stated.
- h This is the amount claimed in 338 cases, the amount claimed in the other 369 cases not being stated.

Number of letters written during the year, 2,373.

STATE AND HORSE CLAIMS DIVISION.

State claims.	Original account.		Suspended account.	
	Num- ber.	Amount.	Num- ber.	Amount.
On hand Juno 30, 1879.....	9	\$4, 247, 868 07	21	\$4, 385, 151 41
Received during the fiscal year ended June 30, 1880.....	2	336, 013 48	14	710, 813 05
Total .....	11	4, 583, 881 55	35	5, 095, 964 46
Reported during the fiscal year ended June 30, 1880 .....	3	487, 131 22	4	67, 320 91
On hand June 30, 1880.....	8	4, 096, 750 33	31	5, 028, 643 55



Horse claims.	Num-ber.	Amount.	Num-ber.	Amount.
On hand June 30, 1879.....			5, 196	\$941, 316 51
Received during the fiscal year ended June 30, 1880.....			256	66, 315 92
Reconsidered during the fiscal year ended June 30, 1880.....			67	9, 197 26
Total .....			5, 519	1, 016, 829 69
Claims allowed during the fiscal year ended June 30, 1880....	581	\$105, 720 99		
Amount disallowed on same.....		13, 706 78		
Amount claimed.....		119, 427 77		
Claims rejected during the fiscal year ended June 30, 1880....	36	5, 686 80		
Total .....	617	125, 114 57		
Deduct as finally disposed of.....			617	125, 114 57
On hand June 30, 1880.....			4, 002	891, 715 12

Number of briefs made, 881. Number of claims examined and suspended, 1,893. Number of letters written, 5,500. Number of letters received and recorded, 5,230. Number of clerks employed, 5.

COLLECTION DIVISION.

	Entries on regis- ters.	Number of special cases.	Accounts referred to.	Bounty-land and pension cases ex- amined.	Letters written.	Names of soldiers of war of 1812 abstracted.	Days comparing.	Cases prepared for suit.
July, 1879.....	1, 200	307	3, 093	578	233	2, 691	8	....
August, 1879.....	1, 120	254	2, 988	428	224	708	6	....
September, 1879.....	939	401	4, 044	65	387	1, 913	54	1
October, 1879.....	884	191	1, 425	297	158	3, 517	....	....
November, 1879.....	960	204	2, 391	253	192	3, 589	55	2
December, 1879.....	823	210	1, 488	865	189	5, 026	57	3
January, 1880.....	311	139	1, 272	965	82	5, 763	50	1
February, 1880.....	257	139	971	549	113	8, 732	8	....
March, 1880.....	1, 079	275	1, 520	682	211	12, 950	....	....
April, 1880.....	906	207	1, 656	327	183	11, 464	....	....
May, 1880.....	792	222	1, 953	260	195	11, 207	....	1
June, 1880.....	795	198	5, 872	322	178	7, 038	....	1
Total .....	10, 066	2, 747	29, 273	5, 591	2, 365	75, 198	238	9

Work has been continued during the fiscal year in abstracting the names of soldiers of the war of 1812, for the purpose of arrangement in alphabetical registers, with all the clerical force available. Up to date three hundred and forty-six thousand four hundred and thirty-two payments have been abstracted, which is probably one-half of the payments made for services in that war. In order to complete these registers within a period of time that will be available to the old soldiers and their widows, whose applications for pension are now pending in the office of the Commissioner of Pensions, but whose service cannot be traced for lack of data to base a search upon, an increase in the clerical force in this division will be necessary. In many cases, of widows, especially, who know the fact by tradition that their former husbands served in the war of 1812, the claimants do not know or have forgotten the names of the officers under whom they served. Until these alphabetical registers are completed this office is unable to trace the service of any soldier without the name of the captain or colonel under whom the soldier served. When these registers shall be completed a knowledge of the name of the soldier will be a sufficient clue to trace his military service. When the

abstract slips are entered upon registers they may be sent to the States from which the soldiers enlisted to become a part of the records of the State. The current work of the collection division has largely increased during the fiscal year, and if the same ratio of increase continues additional clerical force will be required to keep it up.

## ARMY PENSION DIVISION.

Amounts refunded to the credit of the following appropriations, during the fiscal year ended June 30, 1880:

Army pensions 1877 and prior years .....	\$23,628 45
Army pensions 1878 .....	2,077 68
Army pensions 1878, being amount to credit of appropriation June 30, 1879 .....	1,339,582 06

The above amounts were carried to the surplus fund.

Balance on hand June 30, 1879, appropriation 1879, being the unexpended part of the \$1,800,000 appropriated .....	736,173 34
Amount refunded and deposited, appropriation 1879 .....	596,365 67
	1,332,539 01
Amount paid on settlement of accounts, appropriation 1879 .....	89,562 36
Balance to credit of appropriation June 30, 1880 .....	1,242,976 65

	Army pensions.	Pay and allowances.	Fees to surgeons.	Total.
Amount appropriated for Army pensions, fiscal year 1880; act January 27, 1879 .....	\$28,400,000 00	\$225,000 00	\$202,500 00	\$28,827,500 00
Amount appropriated for Army pensions, fiscal year 1880; act May 31, 1880 .....	8,500,000 00	15,000 00	.....	8,515,000 00
Total .....	36,900,000 00	240,000 00	202,500 00	37,342,500 00
Amount to credit of appropriation undrawn June 30, 1880 .....	357 53	6,587 64	111,340 00	118,285 17
Amount drawn to be accounted for .....	36,899,642 47	233,412 36	91,160 00	37,224,214 83
Amount disbursed by pension agents .....	36,291,814 64	211,391 66	73,161 00	36,576,367 30
Amount unexpended on change of bond deposited but not yet credited .....	80,892 48	368 28	1,579 00	82,839 71
Amount of unexpended balance in hands of agents June 30, 1880, to be deposited .....	526,912 47	20,652 42	15,920 00	563,484 89
Amount transferred from Army to Navy pensions by Treasury warrant .....	.....	1,000 00	500 00	1,500 00
Amount erroneously deposited by agent to be repaid .....	22 93	.....	.....	22 93
Total .....	36,899,642 47	233,412 36	91,160 00	37,224,214 83

## ARREARS of PENSIONS.

	Arrears of pensions.	Fees on vouchers.	Total.
Amount appropriated, acts January 29 and March 3, 1879 .....	\$25,000,000 00	\$15,000 00	\$25,015,000 00
Amount appropriated, act May 31, 1880 .....	500,000 00	.....	500,000 00
Total .....	25,500,000 00	15,000 00	25,515,000 00
Amount disbursed by pension agents, fiscal year 1879, "Army" .....	4,010,527 33	1,884 00	4,021,411 33
Amount disbursed by pension agents, fiscal year 1880, "Army" .....	19,609,855 78	10,535 10	19,620,390 88
Total .....	23,629,383 11	12,419 10	23,641,802 21

The following tabular statement shows the number of accounts received and audited during the fiscal year:

	Army pensions.		Arrears of pensions.		Total.	
	Num- ber.	Amount.	Num- ber.	Amount.	Num- ber.	Amount.
Accounts on hand June 30, 1879 ..	88	\$12, 275, 103 43			88	\$12, 275, 103 43
Accounts received during the year ..	316	37, 490, 642 83	231	23, 519, 480 12	647	61, 010, 122 95
Total .....	405	49, 765, 746 26	231	23, 519, 480 12	636	73, 285, 226 38
Accounts reported to the Second Comptroller .....	265	29, 639, 685 33	12	1, 530, 932 78	277	31, 169, 748 01
Accounts on hand unsettled .....	140	20, 126, 051 03	219	21, 988, 487 34	359	42, 115, 488 37
Total .....	405	49, 765, 746 26	231	23, 519, 480 12	636	73, 285, 226 38

Pensioners recorded .....	19, 276
Pensioners transferred .....	949
Pensioners increased .....	7, 365
Pensioners restored .....	1, 259
Certificates reissued .....	1, 811
Changes noted .....	635
Corrections made .....	3, 711
Arrears notifications recorded .....	2, 636
Pension vouchers examined .....	832, 890
Payments entered .....	777, 964
Pages of abstract added .....	26, 801
Pages of miscellaneous copied .....	933
Payments corrected .....	451
Copies of surgeons' certificates sent to Commissioner .....	220
Vouchers withdrawn from files .....	6, 525
Letters received and registered .....	3, 024
Letters written .....	4, 414
Letters copied in record .....	3, 636
Letters indexed .....	3, 603
Pension checks verified before payment, 65, amounting to .....	\$9, 806 75
Settlements for lost checks made, 53, amounting to .....	2, 021 84
Amount appropriated for printing pension checks, act March 3, 1879, "1879" ..	8, 500 00
Amount appropriated for printing pension checks, act March 3, 1879, "1880" ..	9, 000 00
Amount paid on settlement of accounts, "1879" .....	8, 500 00
Amount paid on settlement of accounts, "1880" .....	8, 336 00

The following tabular statement exhibits the number and amount of accounts on hand and unsettled July 1, 1869, together with those received and audited each fiscal year since.

	Received.		Audited.	
	Number.	Amount.	Number.	Amount.
On hand July 1, 1869 .....	637	\$34, 611, 503 83		
Received during fiscal year 1870 .....	714	27, 743, 819 20	631	\$25, 696, 870 39
Received during fiscal year 1871 .....	930	28, 513, 202 44	789	22, 812, 834 28
Received during fiscal year 1872 .....	694	24, 001, 507 26	900	40, 000, 205 68
Received during fiscal year 1873 .....	711	28, 756, 702 92	705	23, 926, 550 19
Received during fiscal year 1874 .....	804	29, 708, 232 36	786	28, 431, 956 71
Received during fiscal year 1875 .....	799	20, 572, 855 54	619	19, 224, 428 53
Received during fiscal year 1876 .....	741	28, 248, 161 99	1, 150	48, 483, 038 02
Received during fiscal year 1877 .....	834	27, 800, 850 30	952	24, 007, 985 43
Received during fiscal year 1878 .....	538	23, 194, 149 18	716	24, 183, 591 52
Received during fiscal year 1879 .....	250	26, 123, 111 04	281	25, 765, 879 58
Received during fiscal year 1880 .....	547	61, 010, 132 95	277	31, 169, 748 01
On hand and received .....	8, 254	384, 343, 078 60		342, 227, 590 29
Amount audited .....	7, 895	342, 227, 590 23		
Balance on hand June 30, 1880 .....	359	42, 115, 488 37		

The force employed in this division during the last year numbered 36 clerks and 1 copyist. The consolidation of agencies, together with the granting of pensions by acts of March 9, 1878, and "arrears of pension," have caused the vast accumulation of work now on hand. There are over 40,000 notifications of "arrears" received not yet recorded. Large numbers of cases are referred to this office for verification of records and calculation of amount due before payment can be made by the agent. This current work requires prompt attention. The force heretofore employed has been insufficient to keep up the work, but the clerks have all been faithful and energetic in the discharge of their duties, the pro rata of labor performed being larger. The following tabular statements exhibit the amount disbursed by the several agents, and the unexpended balances in hand June 30, 1880:

**AMOUNT DISBURSED by PENSION AGENTS, during the fiscal year ended June 30, 1880, as shown by their ACCOUNTS-CURRENT.**

State.	Agency.	Agent.	Invalids.	Widows.	Minors.
California.....	San Francisco.....	W. H. Payne.....	\$159,702 67	\$28,230 88	\$7,734 85
Dist. Columbia.....	Washington .....	J. S. Witcher .....	1,978,483 07	408,488 37	75,121 80
Indiana.....	Indianapolis .....	F. Knefler .....	1,288,561 39	359,569 21	151,664 62
Illinois .....	Chicago .....	Ada C. Sweet.....	1,979,718 83	532,272 25	187,231 77
Iowa.....	Des Moines .....	B. F. Gue .....	1,352,427 30	210,853 35	68,969 56
Kentucky .....	Louisville.....	R. M. Kelly.....	353,240 55	259,160 42	81,010 13
Massachusetts.....	Boston .....	D. W. Gooch.....	1,278,505 22	538,588 70	60,064 16
Missouri.....	Saint Louis .....	R. Campion.....	1,299,779 99	322,147 05	143,665 41
Michigan.....	Detroit .....	S. Post .....	931,268 72	197,309 68	67,413 53
New Hampshire.....	Concord.....	E. L. Whitford...	1,286,967 31	351,261 21	61,609 76
New York .....	Syracuse.....	T. L. Poole.....	1,362,000 94	416,677 35	76,026 24
Do.....	New York City....	C. R. Coster.....	1,006,090 31	445,047 37	71,585 61
Ohio.....	Columbus .....	A. T. Wikoff.....	1,798,022 51	626,444 30	131,867 00
Pennsylvania.....	Pittsburgh.....	W. A. Herron....	1,157,465 13	265,882 92	79,582 95
Do.....	Philadelphia.....	H. G. Sickel.....	1,334,845 48	454,529 12	65,799 02
Tennessee .....	Knoxville.....	D. T. Boynton ...	648,751 16	476,114 62	133,221 92
Wisconsin .....	Milwaukee.....	E. Ferguson .....	1,308,842 31	234,841 07	92,758 77
Total.....			20,524,672 89	6,127,417 85	1,555,867 10
Deduct amount of credits on account of overpayments .....			916 08	302 16	92 20
Total.....			20,523,756 81	6,127,115 69	1,555,774 90

State.	Agency.	Agent.	Dependent relatives.	War of 1812.		Surgeons.
				Survivors.	Widows.	
California.....	San Francisco .....	W. H. Payne.....	\$12,062 00	\$4,908 81	\$12,877 73	\$287 00
Dist. Columbia.....	Washington .....	J. S. Witcher .....	232,198 19	39,501 60	141,224 13	4,325 00
Indiana.....	Indianapolis .....	F. Knefler .....	175,099 02	27,027 21	94,999 75	4,409 00
Illinois .....	Chicago .....	Ada C. Sweet.....	377,890 26	33,758 59	106,858 68	5,421 00
Iowa.....	Des Moines.....	B. F. Gue .....	194,139 57	18,827 77	49,729 30	4,183 00
Kentucky.....	Louisville .....	R. M. Kelly.....	136,051 10	25,113 63	105,144 74	1,416 00
Massachusetts.....	Boston.....	D. W. Gooch.....	416,073 09	60,992 96	204,112 92	5,873 00
Missouri.....	Saint Louis .....	R. Campion .....	137,970 88	25,795 47	85,631 59	4,212 50
Michigan.....	Detroit .....	S. Post.....	143,850 61	29,651 23	75,671 20	3,184 00
New Hampshire .....	Concord .....	E. L. Whitford...	550,921 70	107,683 79	306,242 01	4,800 00
New York .....	Syracuse.....	T. L. Poole.....	457,211 11	92,153 93	229,307 09	4,915 50
Do.....	New York City....	C. R. Coster.....	301,379 49	42,958 50	139,116 33	3,676 00
Ohio.....	Columbus.....	A. T. Wikoff.....	389,573 00	62,025 42	214,415 60	9,569 00
Pennsylvania.....	Pittsburgh.....	W. A. Herron....	314,183 53	24,729 02	87,598 40	4,618 00
Do.....	Philadelphia.....	H. G. Sickel.....	381,275 97	19,936 95	95,660 70	5,957 00
Tennessee .....	Knoxville.....	D. T. Boynton ...	165,064 22	154,934 72	668,164 96	3,571 00
Wisconsin .....	Milwaukee.....	E. Ferguson .....	251,577 64	20,710 79	41,303 01	2,744 00
Total .....			4,636,521 38	790,710 39	2,658,058 14	73,161 00
Deduct amount of credits on account of overpayments .....			26 67		96 00	
Total .....			4,636,494 71	790,710 39	2,657,962 14	73,161 00

## AMOUNT DISBURSED by PENSION AGENTS, &amp;c.—Continued.

State.	Agency.	Agent.	Salaries.	Voucher fees.	Contingent.	Total.
California.....	San Francisco .....	W. H. Payne.....	\$3,999 99	\$175 20	\$740 71	\$230,719 84
Dist. Columbia.....	Washington .....	J. S. Witcher .....	4,000 00	8,727 75	1,164 19	2,893,234 10
Indiana.....	Indianapolis .....	F. Knefler .....	4,000 00	8,157 00	79 26	2,113,566 46
Illinois.....	Chicago.....	Ada C. Sweet.....	4,000 00	9,870 00	1,406 39	3,238,427 77
Iowa.....	Des Moines.....	B. F. Gue.....	4,000 00	5,512 35	1,037 82	1,909,620 02
Kentucky.....	Louisville.....	R. M. Kelly.....	3,999 96	2,950 50	226 78	968,913 81
Massachusetts.....	Boston.....	D. W. Gooch.....	4,000 00	9,608 85	103 46	2,577,922 36
Missouri.....	Saint Louis.....	R. Campion.....	4,000 00	6,278 55	574 78	2,030,056 22
Michigan.....	Detroit.....	S. Post.....	4,000 00	5,452 05	873 64	1,458,674 64
New Hampshire.....	Concord.....	E. L. Whitford.....	4,000 00	10,832 10	1,762 54	2,686,080 42
New York.....	Syracuse.....	T. L. Poole.....	4,000 00	9,763 80	1,037 36	2,653,093 32
Do.....	New York City.....	C. R. Coster.....	4,000 00	7,274 70	4,774 96	2,025,903 27
Ohio.....	Columbus.....	A. T. Wikoff.....	4,000 00	12,472 80	889 87	3,249,279 50
Pennsylvania.....	Pittsburgh.....	W. A. Herron.....	3,999 96	6,396 60	722 74	1,945,179 25
Do.....	Philadelphia.....	H. G. Sickel.....	4,000 00	8,425 65	1,869 05	2,372,298 94
Tennessee.....	Knoxville.....	D. T. Boynton.....	4,000 00	8,318 70	803 15	2,262,944 45
Wisconsin.....	Milwaukee.....	E. Ferguson.....	4,000 00	5,084 85	25 50	1,961,887 94
Total.....			67,999 91	125,301 45	18,092 20	36,577,802 31
Deduct amount of credits on account of overpayments.....				90	1 00	1,435 01
Total.....			67,999 91	125,300 55	18,091 20	36,576,367 30

## AMOUNT of "ARMY ARREARS of PENSION" DISBURSED during the fiscal year ended June 30, 1880.

State.	Agency.	Agent.	Invalids.	Widows.&c.	Voucher fees.	Total.
California.....	San Francisco.....	William H. Payne.....	\$112,109 51	\$9,278 32	\$61 80	\$121,449 63
District of Columbia.....	Washington.....	J. S. Witcher.....	946,410 91	227,301 23	612 90	1,174,325 04
Indiana.....	Indianapolis.....	F. Knefler.....	1,310,736 70	226,249 85	846 00	1,537,832 55
Illinois.....	Chicago.....	Ada C. Sweet.....	1,573,226 01	301,062 14	998 70	1,875,286 85
Iowa.....	Des Moines.....	B. F. Gue.....	976,740 67	143,152 48	624 90	1,120,518 05
Kentucky.....	Louisville.....	R. M. Kelly.....	360,961 81	230,223 47	287 10	591,472 38
Massachusetts.....	Boston.....	D. W. Gooch.....	691,326 37	298,454 57	528 60	990,309 54
Missouri.....	Saint Louis.....	R. Campion.....	1,156,121 18	184,184 08	698 10	1,341,003 36
Michigan.....	Detroit.....	S. Post.....	711,583 36	188,504 71	502 50	900,590 57
New Hampshire.....	Concord.....	E. L. Whitford.....	644,980 55	559,245 39	594 30	1,204,820 24
New York.....	Syracuse.....	T. L. Poole.....	791,141 75	383,192 93	624 30	1,174,958 98
Do.....	New York City.....	C. R. Coster.....	931,124 81	298,216 98	668 70	1,230,010 49
Ohio.....	Columbus.....	A. T. Wikoff.....	1,509,715 28	394,601 44	1,090 80	1,905,407 52
Pennsylvania.....	Pittsburgh.....	W. A. Herron.....	801,696 27	260,346 90	600 00	1,062,643 17
Do.....	Philadelphia.....	H. G. Sickel.....	1,034,038 61	271,559 09	777 30	1,306,375 00
Tennessee.....	Knoxville.....	D. T. Boynton.....	519,010 69	446,525 98	445 50	965,982 17
Wisconsin.....	Milwaukee.....	E. Ferguson.....	877,722 79	240,353 01	573 60	1,118,649 40
Total.....			14,948,647 27	4,662,452 57	10,535 10	19,621,634 94
Deduct amount of credits on account of overpayments.....			668 33	575 73		1,244 06
Total.....			14,947,978 94	4,661,876 84	10,535 10	19,620,390 88

## AMOUNT of UNEXPENDED BALANCES in HANDS of PENSION AGENTS June 30, 1880.

State.	Agency.	Agent.	Army pensions.			
			Army.	Surgeons.	Pay, &c.	Total.
California.....	San Francisco.....	William H. Payne.....	\$1,494 06	\$1,013 00	\$284 10	\$2,791 16
District of Columbia.....	Washington.....	J. S. Witcher.....	14,109 13	2,248 00	1,508 21	17,865 34
Indiana.....	Indianapolis.....	F. Knefler.....	143,238 13	1,091 00	2,263 74	146,592 87
Illinois.....	Chicago.....	Ada C. Sweet.....	279 88	79 00	723 61	1,082 49
Iowa.....	Des Moines.....	B. F. Gue.....	161 15	317 00	49 83	527 98
Kentucky.....	Louisville.....	R. M. Kelly.....	88,793 61	505 00	2,155 08	91,453 69
Massachusetts.....	Boston.....	D. W. Gooch.....	(*)	627 00	2,787 69	3,414 69
Missouri.....	Saint Louis.....	R. Campion.....	16 28	267 50	146 67	450 45
Michigan.....	Detroit.....	S. Post.....	4,835 85	316 00	374 31	5,526 16
New Hampshire.....	Concord.....	E. L. Whitford.....	25,314 22	700 00	105 36	26,119 58
New York.....	Syracuse.....	T. L. Poole.....	41,623 34	534 50	1,698 84	43,906 68
Do.....	New York City.....	C. R. Coster.....	194,172 49	1,824 00	1,950 49	197,946 98
Ohio.....	Columbus.....	A. T. Wikoff.....	2,747 05	931 00	638 33	4,316 38
Pennsylvania.....	Pittsburgh.....	W. A. Herron.....	558 05	82 00	1,380 70	2,020 75
Do.....	Philadelphia.....	H. G. Sickel.....	8,509 04	3,130 00	3,817 51	15,456 55
Tennessee.....	Knoxville.....	D. T. Boynton.....	3,858 30	929 00	378 30	5,165 60
Wisconsin.....	Milwaukee.....	Ed. Ferguson.....	472 94	1,256 00	389 65	2,118 59
Total.....			530,183 52	15,920 00	20,652 42	566,755 94
Deduct amounts overdrawn by agents.....			*3,271 05			3,271 05
Total.....			526,912 47	15,920 00	20,652 42	563,484 89



AMOUNT of UNEXPENDED BALANCES, &c.—Continued.

State.	Agency.	Agent.	Arrears of pensions.		
			Arrears.	Fees.	Total.
California .....	San Francisco.....	William H. Payne ....	\$14,864 00	\$11 40	\$14,875 40
District of Columbia ..	Washington .....	J. S. Witcher .....	86,165 94	120 00	86,285 94
Indiana .....	Indianapolis .....	F. Knefler .....	20,174 20	33 70	20,207 90
Illinois.....	Chicago .....	Ada C. Sweet.....	427 39	142 60	569 99
Iowa .....	Des Moines .....	B. F. Gue .....	15,260 34	93 20	15,353 54
Kentucky .....	Louisville .....	R. M. Kelly .....	17,019 54	20 80	17,040 34
Massachusetts .....	Boston .....	D. W. Gooch .....	102,685 62	131 90	102,817 52
Missouri .....	Saint Louis .....	R. Campion .....	25,908 71	(1)	25,908 71
Michigan .....	Detroit .....	S. Post.....	447 25	31 20	478 45
New Hampshire.....	Concord .....	E. L. Whitford .....	111,337 47	75 80	111,413 27
New York .....	Syracuse.....	T. L. Poole.....	42,665 32	25 70	42,691 02
Do .....	New York City.....	C. R. Coster.....	93,705 73	99 60	93,805 33
Ohio .....	Columbus.....	A. T. Wikoff .....	5,702 16	45 10	5,747 26
Pennsylvania .....	Pittsburgh .....	W. A. Herron.....	43,361 11	53 10	43,414 21
Do .....	Philadelphia.....	H. G. Sickel.....	23,313 85	245 40	23,559 25
Tennessee.....	Knoxville.....	D. T. Boynton.....	35,186 09	148 40	35,334 49
Wisconsin .....	Milwaukee.....	Ed. Ferguson .....	57,630 73	52 90	57,683 63
Total.....			695,855 45	1,330 80	697,186 25
Deduct amounts overdrawn by agents .....				6 10	6 10
Total.....			695,855 45	1,324 70	697,180 15

THE FILES.

The number of official money settlements filed during the year is 4,638, making the number since March, 1817, when this office was created, 183,380. In this number are included only the settlements for horses lost in the military service which were made since February, 1878. The pension settlements, which include all vouchers of army pensioners from 1818 to the present time, are in a good state of preservation, but many of the abstracts have been often handled and need repairing and binding.

These settlements are now numbered and kept in a separate series, and the papers are much greater in bulk than all the others. The settlements of accounts of officers of the quartermaster, commissary, and engineer departments are now filed in one series and are in good condition. The settlements of miscellaneous claims also form a separate series, and are rapidly increasing in number and bulk; they are well preserved. There are more than 50,000 property returns filed in this office not included in the above which are also well kept. Much inconvenience has been caused in the past few months by want of room for new settlements which were accumulating; but a large apartment recently vacated by the Bureau of Engraving and Printing has been assigned for the use of this bureau. This room, which is a large apartment, well lighted and ventilated, is quite suitable for files. It will probably soon be ready for occupancy, and when completed will suffice for several years to come.

There were nine lady copyists employed during the year. The number of pages copied and compared by them was 13,678, letters recorded 4,496, making a total of 18,174 pages. The number of names indexed was 25,555. Number of papers copied, 4,747.

It gives me pleasure to testify to the general faithfulness, industry, and fidelity displayed by the clerks employed in this office, and to commend them for the intelligent discharge of the duties assigned them.

E. W. KEIGHTLEY,  
Third Auditor.

Hon. JOHN SHERMAN,  
Secretary of the Treasury.

## REPORT OF THE FOURTH AUDITOR OF THE TREASURY.

TREASURY DEPARTMENT,  
FOURTH AUDITOR'S OFFICE,  
Washington, November 1, 1880.

SIR: In obedience to the law requiring the auditor charged with the examination of the accounts of the Department of the Navy to report annually on the first Monday in November to the Secretary of the Treasury the application of the money appropriated for the Navy Department, and in compliance with your request of September 13 last, for a statement showing the condition of the public business intrusted to my charge, for the fiscal year ending June 30, 1880, I respectfully submit the following:

## APPLICATION OF MONEY.

The subjoined statement gives in a summary way the application of the money appropriated by Congress for the support of the Navy. It is desirable that this information should be given more in detail, which would require also more minuteness of specification in the appropriations themselves. Wise economy in the appropriation and expenditure of money requires an itemized account. A complete exhibit of this kind would show specifically the precise purpose for which every dollar was appropriated and how expended. If the expenditure had been greater or less than the specific appropriation, the reason would be stated. Such an exhibit, while furnishing desirable information for the people, would give the appropriating power the exact facts needed when grants for a subsequent year are under consideration.

The last column of the following table is made up from the sums named in the money requisitions passed during the fiscal year. It shows approximately the expenditures for the year; but, owing to the nature of the naval service which is performed in remote seas, it occurs unavoidably that bills made on account of accident or other unforeseen circumstances near the close of the year do not reach this office until a considerable time after the year has closed. It sometimes happens that a disbursing officer may charge a payment to a wrong appropriation, and the error, when discovered, is corrected by the accounting officers in the adjustment of his account. The discrepancy which appears in the aggregate amount of the drafts drawn on the Messrs. Seligman Bros., and the amount paid by them during the year, is explained by the fact that bills sold near the close of the year may not be paid until after the beginning of the succeeding fiscal year.

Title of appropriation.	Year.	Amount appropriated.	Amount expended.
Pay of the Navy.....	1880	\$6, 768, 275 00	\$5, 573, 184 81
Pay, miscellaneous .....	1880	475, 000 00	256, 462 41
Contingent of the Navy .....	1880	80, 000 00	79, 233 20
Marine Corps:			
Pay of the .....		649, 397 00	550, 673 85
Provisions.....	1880	75, 007 50	47, 538 11
Clothing.....	1880	60, 000 00	59, 734 33
Fuel.....	1880	20, 000 00	11, 731 07
Military stores .....	1880	9, 626 50	9, 686 50
Transportation and recruiting.....	1880	7, 000 00	7, 000 00
Repairs of barracks .....	1880	13, 000 00	13, 000 00
Forage for horses .....	1880	500 00	450 00
Contingent of.....	1880	20, 000 00	20, 000 00
Naval Academy:			
Pay of professors and others.....	1880	53, 126 00	52, 000 00

Title of appropriation.	Year.	Amount appropriated.	Amount expended.
<b>Naval Academy—Continued.</b>			
Pay of watchmen.....	1880	\$24,455 00	\$24,455 00
Pay of mechanics.....	1880	16,835 95	16,835 95
Pay of steam-employés.....	1880	8,577 50	8,577 50
Repairs.....	1880	21,000 00	21,000 00
Heating and lighting.....	1880	17,000 00	16,000 00
Library.....	1880	2,000 00	2,000 00
Stationery.....	1880	2,000 00	2,000 00
Chemistry.....	1880	2,500 00	2,500 00
Stores.....	1880	800 00	800 00
Materials.....	1880	1,000 00	1,000 00
Board of visitors.....	1880	2,600 00	2,600 00
Miscellaneous.....	1880	34,600 00	34,600 00
Navigation and navigation supplies.....	1880	104,500 00	99,028 15
Hydrographic work.....	1880	46,000 00	37,655 87
Navigation:			
Contingent.....	1880	2,000 00	1,980 22
Civil establishment.....	1880	10,417 25	10,417 25
Naval Observatory.....	1880	22,100 00	21,265 30
Nautical almanac.....	1880	22,500 00	19,298 47
Velocity of light, nautical almanac.....	1880	5,000 00	413 00
Solar and stellar photography.....		1,000 00	1,000 00
Illustrations for Report on Solar Eclipse.....		1,500 00	1,372 38
Wood-cuts of nebula in Orion.....		350 00	350 00
Ordnance and ordnance stores.....	1880	225,000 00	175,322 30
Ordnance:			
Civil establishment.....	1880	11,886 25	11,885 24
Contingent of.....	1880	3,000 00	2,192 85
Torpedo corps.....	1880	45,000 00	40,557 88
Equipment of vessels.....	1880	800,000 00	678,890 10
Equipment and recruiting:			
Civil establishment.....	1880	18,251 75	18,251 75
Contingent of.....	1880	50,000 00	47,019 11
Yards and docks:			
Maintenance of.....	1880	440,000 00	416,372 60
Civil establishment.....	1880	37,906 25	37,113 75
Contingent of.....	1880	20,000 00	13,980 46
Naval Asylum, Philadelphia.....	1880	59,300 00	18,341 94
Medicine and surgery:			
Medical department.....	1880	45,000 00	36,102 26
Naval hospital fund.....	1880	50,000 00	35,917 21
Civil establishment.....	1880	40,000 00	39,425 00
Repairs.....	1880	30,000 00	16,293 81
Contingent of.....	1880	15,000 00	13,124 14
Provisions of Navy.....	1880	1,025,000 00	901,784 02
Provisions and clothing:			
Civil establishment.....	1880	11,394 25	11,392 36
Contingent of.....	1880	60,000 00	53,516 97
Construction and repair.....	1880	1,500,000 00	1,400,089 32
Civil establishment, construction and repair.....	1880	40,105 75	39,721 00
Steam machinery.....	1880	800,000 00	615,127 50
Machine for testing iron.....	1880	3,000 00	
Steam engineering:			
Civil establishment.....	1880	20,038 00	20,037 99
Contingent of.....	1880	1,000 00	999 80
Navy-yard, Mare Island.....	1880	75,000 00	75,000 00
Navy-yard, Boston.....	1880	20,000 00	19,997 33
Repairs and preservations, navy-yards.....	1880	300,000 00	286,353 31
Repairs of United States steamship Antietam.....	1880	7,525 00	7,517 13
New propeller for United States steamship Alarm.....		20,000 00	11,616 97
Extra pay to officers and men who served in the Mexican war.....		38,179 28	18,981 28
Transfer of lands in Florida not needed for naval purposes.....		3,000 00	953 11
<b>Total.....</b>		<b>14,393,323 23</b>	<b>12,083,725 43</b>

*Permanent and miscellaneous appropriations and funds.*

Prize money to captors.....	\$5,883 11
Medals of honor.....	55 50
Destruction of bedding and clothing for sanitary reasons.....	\$1,200 00 258 59
Miscellaneous expenses, new Naval Academy.....	5,000 00 5,000 00
Clothing, Navy.....	178,545 36
Relief act for children of O. H. Berryman and others.....	289 31
Relief of the administrators of J. D. McGill.....	102 00 102 00
Relief of Peter Meagher.....	170 00 170 00
Relief of sufferers by wreck of Huron.....	504 00
Sale of small arms.....	46,401 00 33,837 10
Ordnance materials, proceeds of sales.....	26,342 23

The amount appropriated for officers of the active list was \$3,822,875; for the retired list \$645,400; total \$4,468,275. The amount due and unpaid June 30, 1880, was \$110,325.53. Net amount paid to officers \$4,357,949.47. The amount appropriated for petty officers and men was \$2,300,000. The amount due and unpaid June 30, 1880, was \$608,652.85. Net amount paid to petty officers and men \$1,691,347.15. The whole amount due and unpaid to officers and men at the close of the fiscal year was \$718,978.38. This amount has doubtless been mostly paid by this time and the unexpended balance of the appropriation for pay of Navy correspondingly diminished. Vouchers for payments made during the year, but not included in the above table, will probably exhaust the balances as shown there.

#### ACCOUNT WITH SELIGMAN BROS.

The disbursements of the Department of the Navy, through the Messrs. Seligman Bros., temporary special agents in London, amount for the year to \$1,724,746.79, being \$213,592.80 less than the previous year. A commission of 1 per cent. was paid to these agents amounting to \$17,246.02. By the terms of the contract they pay interest on balances in favor of the Department at the rate of 4 per cent. per annum, and for the advances made by them they receive 5 per cent. The interest paid to them during the year was \$2,698.50; and the interest paid by them \$2,925.44. For the previous year the interest account was \$6,194.82 against the Department and \$2,475.04 in its favor. The interest paid to Seligman Bros. for the first two months of the current fiscal year, July and August, 1880, was \$2,372.42. For the twenty-six months closing with the date last named, the interest paid on advances made by them was \$11,265.74, and the interest paid by them was \$5,400.48, the balance of interest against the Department being \$5,865.26. Money is transferred to London usually by the purchase in New York of sixty-day bills of exchange on London, resulting in almost all cases to the advantage of the Department. The net gain from this source during the year was \$7,963.41, and for the previous year \$10,764.99.

#### EXCHANGE.

Bills of exchange were sold by the pay officers of the Department of the Navy during the year to the amount of \$1,935,478.30. These, with the exception of thirty in number drawn directly on the Secretary of the Navy, and amounting to \$188,590.91, were sight drafts on Seligman Bros., London. The premiums amounted to \$1,459.63, and the discount to \$28,089.20—a net loss to the Department of \$26,629.57. The net loss on the drafts drawn on the Secretary was \$285.21. Pay officers are instructed to draw on the Secretary when practicable; but in the larger number of foreign ports at which our vessels touch, drafts on the United States are either not salable or cannot be negotiated so satisfactorily as those on London. On the Pacific coast of Mexico and South America, the Sandwich Islands and the West Indies, drafts on the Secretary have been sold to good advantage; but in the ports of China and Japan, the South Atlantic, and the Mediterranean, bills are not often wanted except on London.

During the past year more than usual attention has been given to this subject in this office. A circular was prepared showing in detail the drafts drawn on Seligman Bros. for the fiscal years ending June 30, 1878, and June 30, 1879. This was printed and sent to pay officers by the authority of the Secretary of the Navy, with the hope that it would

result in an increase of diligence on their part and a consequent reduction of expense in converting drafts into money. It was shown that for the two years named the gains had been \$30,699.91, and the losses \$52,277.11—a net loss of \$21,279.20. The gains resulted mainly from transactions in Mexican dollars, which were then valued according to the United States silver standard. It was suggested in the above-mentioned circular that the credit of the United States was so thoroughly established, and the demand for the best bills on London so general in the ports visited by the vessels of our Navy, that the drafts of pay officers, if carefully negotiated, should, in nearly all places, bring their face value, and often a premium, in gold or its equivalent.

On January 1, 1880, the value of the Mexican dollar, which had been for the year previous \$1.015, was fixed by the annual circular of the Treasury Department at \$0.909. Some question arose as to the effect this new valuation would have on the cost of maintaining the Navy of the United States in parts of the world where the Mexican dollar was one of the principal kinds of money in use. The first sale for Mexican dollars under the new valuation was at Shanghai, China, April 7, 1880. The bill was for £8,000, or \$38,932, and the number of Mexican dollars received for it was \$41,290.32. These, paid out at the new rate, amounted to \$37,532.90, or \$3,757.42 less than the face of the Mexicans. As the bill was sold, the loss to the Department in exchange was \$1,399.10. At the former valuation this loss would have been changed into a gain of \$1,358.32. The sale of bills for Mexican dollars from April 7 to June 30, 1880, all in China and Japan, amounted to \$218,992.50, and the number of Mexican dollars received therefor was \$234,052.72. The aggregate loss to the Department on these was \$8,965.58. Had the Mexican dollars been paid out at their face value this loss would have been transformed into a gain of \$15,060.22. During the first three quarters of the fiscal year bills were sold in China and Japan for gold, the Japanese "yen," a gold coin almost identical in weight and fineness with our gold dollar, being worth \$0.997, serving as the unit of value. These transactions amounted in the aggregate to \$433,118.50. The loss on exchange was \$7,807.71, or \$1,157.87 less than the loss in the silver transactions mentioned above, involving but a trifle over one-half the aggregate sum. Unless circumstances exist which have not been explained, it would have been a considerable saving to the Department if sales for gold had been continued.

The embarrassing feature connected with this subject, so far as this office is concerned, is an almost total lack of means necessary for any intelligent supervision of the sales of bills of exchange. The regulations of the Navy require that the account of sale forwarded to this office must include the certificate of two respectable merchants resident at the place where the bill was sold, stating the current rates of exchange at that time on London and New York, and in what money payable. Such certificates, however, are considered of very little value, if not actually worthless, in a majority of cases. It is in evidence that these certificates can easily be obtained, signed in blank, at the instance of an interested broker or banker, and that sometimes instead of being a help to a proper dispatch of business they may become a convenient cloak to cover improper transactions. Careful pay officers do not esteem such certificates as evidence of due diligence on their part, but protect their reputation by other and better means.

While, during the last year, bills have been sold in more than fifty different ports, full three-fourths of the sales in amount have been made in one-fifth of that number of places. Thus the aggregate sales in Cal-



bo, Constantinople, Gibraltar, Hong-Kong, Honolulu, Montevideo, Nice, Rio Janeiro, Shanghai, and Yokohama amounted to \$1,462,846.60. If this office were furnished with the financial reports contained in the newspapers of these ten places, it would have a basis for intelligent judgment concerning the bulk of the sales of exchange. These could be supplied at a comparatively small cost. It may also be added that financial reports giving the rates of exchange taken from newspapers of even date with the account of sales and attached thereto would be of much more value than the certificates of any number of resident merchants, the most of whom would not be engaged in foreign trade nor have any special knowledge of the current rates of exchange.

#### WORK OF THE OFFICE.

The following tables give a brief exhibit of the work of the office for the year. The whole number of accounts and claims received was 2,531. The number settled was 2,829, and the amount involved \$18,244,321.01. The number of letters received was 17,741, and the number written 18,862. The number of letters recorded was 26,458; indexed, 39,298. Cash requisitions issued, 2,145, amounting to \$19,482,638.33. Refunding requisitions, 347, amounting to \$6,617,068.39. Unsettled accounts on hand June 30, 1879, 949. The same June 30, 1880, 651; a decrease of 298.

#### PAYMASTERS' AND MARINE ACCOUNTS DIVISION.

Date.	Accounts received.	Accounts settled.	Letters received.	Letters written.	Cash vouchers.	Cash disbursements.
<b>1879.</b>						
July .....	32	38	131	96	978	\$868,957 04
August .....	39	27	102	83	445	548,584 25
September .....	23	21	100	112	752	510,451 68
October .....	29	32	148	116	637	1,264,062 94
November .....	42	33	115	102	527	915,745 58
December .....	19	29	101	104	1,149	677,471 15
<b>1880.</b>						
January .....	26	31	138	92	515	835,897 98
February .....	34	40	127	112	619	1,017,429 06
March .....	27	31	110	141	1,935	1,829,863 27
April .....	27	37	130	98	817	1,116,722 86
May .....	37	31	121	134	486	1,514,948 44
June .....	24	36	105	118	570	1,180,586 24
<b>Total .....</b>	<b>359</b>	<b>386</b>	<b>1,428</b>	<b>1,308</b>	<b>9,430</b>	<b>12,295,740 49</b>

Accounts on hand July 1, 1879, 70.

Accounts on hand June 30, 1880, 43.

#### PURCHASING PAYMASTERS' AND ALLOTMENT ACCOUNTS DIVISION.

Date.	Accounts received.	Accounts settled.	Letters received.	Letters written.	Amount involved.
<b>1879.</b>					
July .....	9	4	133	202	\$110,537 36
August .....	11	8	189	177	597,028 79
September .....	2	24	209	207	56,261 39
October .....	7	32	209	200	596,898 36
November .....	5	30	200	171	405,722 60
December .....	13	57	266	252	547,079 38
<b>1880.</b>					
January .....	9	44	203	181	473,621 11
February .....	7	20	232	220	117,156 53
March .....	9	50	225	221	216,175 74
April .....	9	6	210	210	226,482 91
May .....	6	11	210	203	573,062 33
June .....	10	11	209	215	1,232,353 40
<b>Total .....</b>	<b>97</b>	<b>297</b>	<b>2,583</b>	<b>2,461</b>	<b>5,152,381</b>

PAPERS ACCOMPANYING THE  
ALLOTMENT ACCOUNTS.

Date.	Allotments registered.	Allotments discontinued.
1879.		
July .....	81	118
August .....	62	101
September .....	83	72
October .....	188	140
November .....	111	105
December .....	130	206
1880.		
January .....	187	69
February .....	128	100
March .....	84	104
April .....	131	105
May .....	82	119
June .....	65	100
Total .....	1,332	1,339

AMOUNTS PAID for ALLOTMENTS at NAVY PAY OFFICES, during the year 1879.

New York .....	\$141,716 00
Boston .....	105,329 00
Philadelphia .....	88,292 00
Washington .....	83,963 00
Baltimore .....	30,599 00
San Francisco .....	27,640 00
Norfolk .....	23,892 00
Total .....	501,431 00

Accounts remaining on hand June 30, 1879, 507.  
Accounts remaining on hand June 30, 1880, 307.  
Number of vouchers examined, 32,400.

BOOKKEEPERS' DIVISION.

Date.	Number of pay requisitions.	Amount of pay requisitions.	Number of repay requisitions.	Amount of repay requisitions.	Letters received.	Letters written.	Accounts journalized and entered.	Ledger extracts for settlements.	Answers to inquiries for accounts on ledgers.	Accounts received.	Accounts settled.	Summary statements entered.
1879.												
July .....	187	\$1,395,520 76	34	\$40,132 63	166	333	25	25	117	.....	.....	166
August .....	195	1,620,173 60	33	564,512 12	160	300	19	32	121	.....	.....	70
September .....	193	2,062,471 10	19	257,026 55	181	317	10	30	103	.....	.....	59
October .....	174	1,583,289 63	39	372,650 15	198	307	98	40	98	1	1	112
November .....	166	1,620,345 83	30	217,610 25	136	257	137	35	76	2	2	117
December .....	184	2,001,475 41	21	929,546 78	110	251	112	36	101	.....	.....	77
1880.												
January .....	184	587,189 50	33	345,364 71	168	307	72	27	114	.....	.....	74
February .....	149	1,859,108 29	32	933,654 15	129	234	116	30	78	.....	.....	66
March .....	178	1,447,877 77	16	243,818 99	139	276	80	40	114	.....	.....	72
April .....	179	2,102,141 63	48	1,511,097 48	200	250	29	44	113	2	2	75
May .....	169	1,301,197 13	16	207,124 19	140	221	30	37	114	1	1	67
June .....	187	1,811,847 68	26	994,530 39	175	317	26	41	111	.....	.....	80
Total .....	2,145	19,482,638 33	347	6,617,068 39	1,902	3,370	754	417	1,360	6	6	1,026

## PRIZE-MONEY AND RECORD DIVISION.

Date.	Letters.		Claims.			Amount paid, prize-money.	Records.				
	Received.	Written.	Received.	Settled.	Rejected.		Letters keyed in.	Letters keyed out.	Letters recorded.	Letters indexed.	Dead letters registered.
1879.											
July.....	176	199	40	12	16	\$1,407 61	1,586	1,757	1,824	2,325	8
August.....	161	199	39	27	11	1,289 92	1,460	1,535	1,766	1,766	5
September.....	143	180	40	23	16	999 34	1,394	1,544	756	2,168	12
October.....	179	181	29	16	13	467 04	1,417	1,617	2,624	3,476	10
November.....	138	163	36	19	17	557 52	1,358	1,387	2,120	2,120	13
December.....	156	184	22	11	8	265 74	1,415	1,452	1,687	2,608	6
1880.											
January.....	184	224	31	21	10	532 80	1,574	1,677	2,466	3,628	13
February.....	165	186	33	19	12	1,125 01	1,437	1,448	2,577	4,095	23
March.....	183	250	51	26	25	665 83	1,438	1,768	2,722	4,781	11
April.....	186	237	30	19	11	1,039 72	1,612	1,635	2,661	4,579	10
May.....	121	156	22	12	10	931 45	1,479	1,415	2,595	3,773	5
June.....	169	249	53	28	18	787 38	1,571	1,627	3,260	3,981	9
Total .....	1,961	2,408	426	233	167	10,069 36	17,741	18,862	26,458	39,298	124

This division is charged also with the preparation of all reports and tabular statements called for by Congress and the Secretary of the Treasury, keeping a record of appointments, resignations, removals, and absences, the care and issuing of stationery used in the office, and the payment of salaries to employes.

## NEW ORLEANS AND OTHER PRIZE-MONEY.

Prize-money amounting to nearly fifteen millions of dollars has been awarded for captures made during the rebellion. The apportionment to the captors of the proceeds of each prize has been made upon the books of this office, and all claims presented in due form have been settled up to date. There is yet remaining a considerable sum uncalled for, but claims are constantly being received, presented by seamen who have been abroad, or for other reasons have not been informed of the adjudication of prizes in which they are interested. Claims of heirs of deceased officers and seamen are also being presented, and these require very careful scrutiny to avoid erroneous payments.

Claims have been presented during the year for prize-money accruing during the war with Mexico, the war of 1812, the war with Algiers, and even the Revolutionary War. Most of them have been rejected on account of lack of evidence.

A balance of bounty for the destruction of vessels at New Orleans has not yet been distributed on account of the failure of Congress to appropriate the money required. Besides the vessels captured by the fleet under the command of Admiral Farragut during the engagements near Forts Jackson and Saint Philip, a large number of vessels were destroyed, for which the court in 1873 awarded the sum of \$268,600. At the date of the award there was in the Treasury, after paying fees, &c., but \$93,865.20 to the credit of the appropriation "Bounty for the destruc-

tion of enemies' vessels." This amount was distributed to all the captors. There remains to be appropriated by Congress the sum of \$143,644.47.

Forty-four vessels were admitted to share in this award, and the number of persons entitled to share is more than five thousand.

BOUNTY, ARREARS OF PAY, AND GENERAL CLAIMS DIVISION.

Date.	Claims received.	Claims adjusted.	Amount involved.	Letters received.	Letters written.	Reports on application for pension.	Reports on admission to Naval Asylum.
1879.							
On hand June 30 .....	352						
July .....	192	119	\$16,759 48	856	895	78	2
August .....	145	158	8,871 72	704	732	107	3
September .....	111	177	8,862 03	690	696	173	
October .....	144	128	6,230 20	641	775	135	1
November .....	135	125	4,106 71	579	654	265	2
December .....	75	118	7,426 75	582	612	92	1
1880.							
January .....	87	124	9,297 76	752	774	201	1
February .....	61	78	7,487 08	683	643	202	3
March .....	68	127	7,349 75	681	837	285	
April .....	138	103	6,708 16	782	801	193	2
May .....	136	134	9,404 97	706	642	141	1
June .....	185	172	7,082 39	815	681	31	
Total .....	1,829	1,563	99,587 09	8,473	8,742	1,963	16

THE THREE MONTHS' EXTRA PAY.

Of the number of claims settled in this division, 824 were for the three months' extra pay authorized by the act of February 19, 1879, for services in the war with Mexico, and amount to the sum of \$34,800.33 in the aggregate.

Complaint has been made in some instances, originating, no doubt, from a misapprehension of the facts, that the construction placed upon this law has, to a very great extent, defeated the intention of Congress. The act provides that the gratuity is to be paid subject to the limitations contained in the act of July 18, 1848. That law was passed for the exclusive benefit of persons who were employed in the military service during the Mexican war, and limited the payment to those who "served out their term of engagement, or have been or may be honorably discharged," and to the widows, children, &c., of those "who have been killed in battle, or who died in service, or who *having been honorably discharged* have since died, or may hereafter die, without receiving the three months' pay." The term honorably discharged, as used in the law, applied to the enlisted men, and to the volunteer officers of the army who received an honorable discharge when mustered out at the close of the war, or when their services were no longer required. It will be seen, therefore, that the "limitations" of the law of 1848 necessarily excluded those officers of the Navy and Marine Corps who resigned their positions or remained in the service, and also the heirs of those who resigned or died in the service after the 19th of July, 1848.

A bill amending the act of February, 1879, is now before Congress, and if it should become a law it is presumed that all officers and men of the Navy and Marine Corps who were employed in the prosecution of the war with Mexico, and who have not been dishonorably discharged, will become entitled to the gratuity.

## NAVY PENSION ACCOUNTS DIVISION.

Date.	Accounts received.	Accounts settled.	Letters received.	Letters written.	Amount involved.
<b>1879.</b>					
July .....	6	10	64	32	\$58,609 62
August .....	18	15	144	44	27,258 59
September .....	13	4	71	32	28,914 26
October .....	7	18	42	39	84,420 28
November .....	13	20	190	39	30,581 67
December .....	14	18	200	49	84,188 96
<b>1880.</b>					
January .....	14	11	129	99	66,251 25
February .....	19	8	99	53	30,749 79
March .....	4	19	100	43	120,620 54
April .....	30	14	104	39	13,858 38
May .....	18	22	151	57	93,339 06
June .....	10	18	98	47	47,749 77
Total .....	168	177	1,392	573	686,542 17

*ARREARS of PENSION PAID Under Acts of January 25 and March 4, 1879.*

Date.	Accounts received.	Accounts settled.	Amount involved.
<b>1879.</b>			
July .....	10		
August .....	11		
September .....	4		
October .....	1		
November .....	16		
December .....	3		
<b>1880.</b>			
January .....	1	7	\$54,064 03
February .....	9	15	79,016 02
March .....	2	11	30,444 15
April .....	21	30	61,058 81
May .....	8	2	1,910 94
June .....		15	28,690 86
Total .....	86	80	255,182 81

Pension agencies.	Number of Navy invalid pensioners.	Number of widow pensioners and dependent relatives.	Total number of Navy pensioners.	Disbursements at each agency for the year ending June 30, 1880.
Boston, Mass. ....	480	464	944	\$163,551 28
Columbus, Ohio .....	46	96	142	24,922 23
Chicago, Ill. ....	72	52	124	29,677 63
Concord, N. H. ....	147	164	311	56,994 66
Detroit, Mich. ....	122	23	145	8,326 52
Knoxville, Tenn. ....	64	123	187	28,113 30
Louisville, Ky. ....	11	23	34	3,536 48
Milwaukee, Wis. ....	34	30	64	6,214 62
New York City .....	479	438	917	146,462 49
Pittsburgh, Pa. ....	32	43	75	21,543 64
Philadelphia, Pa. ....	270	421	691	104,159 20
San Francisco, Cal. ....	45	13	63	8,384 21
Saint Louis, Mo. ....	24	37	61	8,033 33
Washington, D. C. ....	350	447	797	144,041 63
Total .....	2,076	2,369	4,445	758,916 48

Number of accounts on hand June 30, 1880, 9; vouchers examined, 14,675.



## NAVY PENSION FUND.

At a very early period of the government Congress enacted that all money accruing to the United States from the sale of prizes shall be and remain forever a fund for the payment of pensions to the officers, seamen, and marines who may be entitled to receive the same. The aggregate amount of this fund now on deposit in the Treasury of the United States is \$14,000,000, on which the government pays interest at the rate of 3 per cent., amounting to \$420,000 a year. If the interest paid on this fund were 4 per cent., the lowest rate at which the government has yet sold any of its bonds, the amount realized would be \$560,000, a sum sufficient to meet the annual pension claims.

Notwithstanding the sacredness of this fund, there are annually bills introduced into Congress designed to make inroads upon it, and to divert it from the righteous purpose to which it has been so justly appropriated. It is to be sincerely hoped that all such designs will fail, and that the principal shall remain intact, while the interest is annually devoted to the just and worthy purpose of compensating officers and men, their widows and children, who have so freely given their services to the government. Instead of dissipating this fund it ought, if possible, to be still more carefully guarded, and secured beyond all peradventure of loss or diminution.

I take pleasure in expressing my obligations to William B. Moore, the long-time faithful and efficient deputy auditor, to the chiefs of divisions, and to the clerks and employes generally, for their devoted and capable service and close attention to their respective duties. While there may be and probably is room for improvement in the condition of the public business committed to my charge, I am glad to believe and to report that it has been carefully attended to during the year, and so conducted as to merit your approval and commendation.

I have the honor to be, very respectfully, your obedient servant,  
**CHARLES BEARDSLEY,**  
*Auditor.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

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**REPORT OF THE FIFTH AUDITOR OF THE TREASURY.**

TREASURY DEPARTMENT,  
 FIFTH AUDITOR'S OFFICE,  
 Washington, D. C., November 1, 1880.

SIR: I have the honor to submit herewith the operations of this office for the fiscal year ended June 30, 1880.

\* \* \* \* \*

The adjustments required the examination of one hundred and eighty-six thousand seven hundred and seventy vouchers, amounting to eight hundred and six millions, five hundred and twenty-nine thousand, seven hundred and ninety-five dollars and eighty-three cents (\$806,529,795.83).

The several clerks engaged in the examination and adjustment of accounts, and keeping the records, and the copyists employed, have been

faithful and industrious, and have given great satisfaction by the manner their respective duties have been performed.

J. B. MANN,  
*Acting Auditor.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*

## REPORT OF THE SIXTH AUDITOR OF THE TREASURY.

OFFICE OF THE AUDITOR  
OF THE TREASURY FOR THE  
POST-OFFICE DEPARTMENT,  
*Washington, D. C., October 26, 1880.*

SIR: I have the honor to submit the following report of the business operations of this office for the fiscal year ended June 30, 1880. My annual report to the Postmaster-General, now in course of preparation, will exhibit in detail the financial transactions of the Post-Office Department during the past fiscal year.\*

\* \* \* \* \*

### NECESSITY FOR THE INCREASED APPROPRIATION FOR WHICH ESTIMATES HAVE BEEN SUBMITTED.

I have the honor to invite your attention to the large increase of business in this office over last fiscal year, as shown by the reports of the several chiefs of division, especially of the Money-Order Division.

The general average of the increase of work in the various divisions is as follows:

- Examining Division, six per cent.
- Registering Division, ten per cent.
- Bookkeeping Division, thirteen per cent.
- Stating Division, nine per cent.
- Collecting Division, seven per cent.
- Foreign Mail Division, eleven per cent.
- Pay Division, ten per cent.
- Money-Order Division, thirty-two per cent.

In my estimates for the service of this bureau for the fiscal year ending June 30, 1882, I have asked for an appropriation for fifteen additional clerks, and I refer to the foregoing statement as conclusive evidence of the necessity for that increase.

There was also submitted an estimate for one chief clerk, at \$2,100 per annum, and, in support thereof, I have to offer the following reasons:

The force now employed in this bureau is greater than that of any of the other bureaus of the Department, and the details of business probably more numerous. Much of the time of the Auditor and Deputy Auditor is occupied with routine office affairs which could very properly be disposed of by a chief clerk.

Under the present organization, no provision is made for filling the place of the Deputy Auditor during his absence or sickness, or that of

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\*NOTE.—A summary of the principal labors performed by the several divisions of this office will be found in the pamphlet copies of the Auditor's report.

the Auditor. The appointment of a chief clerk would supply an officer upon whom this duty could devolve.

By the last reorganization of the clerical force of this office, the position of principal clerk of the Law Division was abolished, and it is intended that the duties formerly discharged by that officer—namely, the preparation of cases for suit and the conduct of the correspondence arising therein—shall be performed by the chief clerk.

I have fixed the compensation at \$2,100 for the reason that the duties and responsibilities proposed to be assigned to the chief clerk would, in my opinion, fully justify such a salary, and in order that the rank of the position may be superior to that of the chiefs of division, over whom he would be called to exercise authority.

This additional appropriation is earnestly recommended as much needed, and in the confident belief that it would materially facilitate the transaction of the business of the office and advance the public interest.

I am pleased to report, in conclusion, that the work of the bureau, in all its branches, is in excellent condition. The accounts of the Post-Office Department, numbering over four hundred thousand, and involving over two hundred million dollars, have been promptly settled, collections made, and liabilities paid, with a loss so slight as to be scarcely appreciable. Never, since the organization of the government, have the accounts of the Post-Office Department been in so satisfactory a condition as at the present time.

To my efficient and faithful Deputy Auditor, Mr. F. B. Lilley, the chiefs of the various divisions, and to the conscientious and untiring efforts of the clerks and other employes of this office, I am indebted for this very favorable condition of the work, and I commend them all to your special favor and confidence.

I am, sir, very respectfully,

J. M. MCGREW,  
*Auditor.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury,*  
*Washington, D. C.*

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## REPORT OF THE TREASURER OF THE UNITED STATES.

TREASURY OF THE UNITED STATES,  
*Washington, November 1, 1880.*

SIR: The following statement of the transactions of this office and of the condition of the public business therein, during the fiscal year 1880, is respectfully submitted.

From the tables in the appendix the following facts appear:

The receipts of the government compare very favorably with those of the previous fiscal year, and show an increase from customs, internal revenue, and sales of public lands, of \$59,811,505.78, and a decrease in those from miscellaneous sources of only \$112,079.26. The expenditures show a slight increase of \$695,074.25 in the aggregate as compared with the previous fiscal year, caused by an increase of \$22,395,040.06 in the payments on account of the Interior Department, but show a decrease

of \$21,699,965.81 in the expenditures for interest and premium on the public debt, on civil and miscellaneous accounts, and for the War and Navy Departments.

The balance of public money on deposit in the Treasury and subject to draft at the close of business June 30, 1879, was \$417,223,787.08; the receipts during the year from all sources amounted to \$494,578,241.20 and the drafts paid to \$708,190,900.76. After deducting receipts properly refunded and outstanding drafts, there was subject to draft, at the close of business June 30, 1880, \$204,683,836.34, which differs from the debt statement balance by \$3,595,213.46, as explained in the appendix.

The business of the government involved the transfer during the year of \$1,053,357,082.22, the greater portion through the medium of the accounts of this office, and the remainder by actual transportation of the funds.

At the close of the year \$28,581,290.93 stood to the credit of disbursing agents of the United States upon the books of the Treasury.

The amount subject to draft June 30, 1879, on account of the postal service was \$2,660,412.29; the receipts during the year, including the amount paid from the Treasury for the deficiency in the postal revenues, were \$35,691,810.29, of which amount \$26,048,562.16 was received and disbursed by postmasters without having been deposited in the Treasury. After deducting deposits refunded and outstanding drafts, there remained subject to draft June 30, 1880, \$2,375,727.04.

The total unavailable funds have not increased during the year by loss or defalcation, but remain unchanged at \$29,512,206.85 for the Treasury, and at \$40,078.06 for the Post-Office Department.

Fifty-eight national banks were organized during the year, five failed, and twenty-one went into voluntary liquidation, leaving two thousand, one hundred and two doing business at the close of the year.

The amount collected from national banks by the Treasurer of the United States for semi-annual duty accruing during the year was \$7,591,770.43. The total amount collected during the existence of the national banking system is \$100,361,469.35.

There were on deposit in this office, at the close of the year, for the security of the circulating notes of national banking associations, United States bonds to the amount of \$361,652,050, and to secure public deposits therein \$14,777,000.

At the close of the year the United States notes and paper currency outstanding amounted to \$362,659,008.70. The total face value of currency redeemed from the date of the first issue is \$2,229,368,462.17, from which the deductions for mutilations under the regulations amounted to \$297,363.76.

The total amount of United States bonds retired by purchase, redemption, conversion, and exchange, from March 11, 1869, to June 30, 1880, is \$1,898,040,750.

The coupons from United States bonds paid during the year amounted to \$31,479,603.86, and there were 296,936 quarterly checks issued in payment of \$40,719,376.04 interest on registered bonds.

There was redeemed during the year \$61,585,675 in national bank notes, making the aggregate amount redeemed under the act of June 20, 1874, \$1,039,838,889.

## THE STATE OF THE TREASURY.

The resources and liabilities of the Treasury on the 30th day of September, 1877, 1878, 1879, and 1880, are exhibited in the following statement:

*STATEMENT of LIABILITIES and ASSETS of the TREASURY of the UNITED STATES, September 30, 1877, 1878, 1879, and 1880.*

	September 30, 1877.	September 30, 1878.	September 30, 1879.	September 30, 1880.
<b>LIABILITIES.</b>				
Fund for redemption of Certificates of Deposit (Act June 8, 1872) .....	\$41, 675, 000 00	\$40, 890, 000 00	\$31, 335, 000 00	\$9, 975, 000 00
Post-Office Department Account.....	1, 672, 707 96	2, 151, 693 76	2, 167, 991 50	2, 600, 489 16
Disbursing Officers' Balances.....	13, 733, 913 59	17, 049, 010 89	26, 007, 876 95	22, 189, 236 49
Fund for redemption of Notes of National Banks "failed," "in liquidation," and "reducing circulation" ..	13, 602, 238 00	9, 182, 400 90	12, 939, 889 75	19, 746, 955 25
Undistributed Assets of failed National Banks.....	856, 379 42	775, 814 12	642, 314 33	616, 560 21
Five-per-cent. Fund for redemption of National Bank Notes .....	14, 199, 294 60	12, 974, 232 75	15, 082, 482 99	15, 428, 010 82
Fund for redemption of National Bank Gold Notes .....	1, 720 00	1, 720 00	219, 940 00	475, 965 00
Currency and Minor-Coin Redemption-Account.....	23, 104 41	5, 987 00	4, 213 15	3, 075 60
Fractional Silver-Coin Redemption-Account.....	.....	.....	152, 664 10	74, 681 75
Interest Account .....	595, 662 25	670, 593 00	101, 514 75	99, 585 00
Interest Account, Pacific Railroads, and Louisville and Portland Canal Company .....	32, 280 00	15, 650 40	6, 270 00	8, 400 00
Treasurer United States, Agent for paying interest on District of Columbia Bonds.....	27, 558 80	40, 811 27	298, 435 54	366, 532 59
Treasurer's Transfer Checks outstanding.....	2, 523, 702 79	2, 492, 885 05	3, 653, 101 29	2, 667, 773 97
<i>Treasurer's General Account.</i>				
Old Debt.....	917, 885 58	877, 864 26	840, 608 41	816, 585 07
Interest due and unpaid .....	8, 447, 864 77	9, 345, 289 13	11, 561, 093 77	9, 784, 449 42
Called Bonds and Interest .....	19, 064, 191 25	12, 015, 016 78	31, 033, 519 65	5, 959, 436 43
Gold Certificates.....	37, 997, 500 00	32, 826, 600 00	14, 910, 900 00	7, 511, 700 00
Silver Certificates .....	.....	2, 028, 070 00	4, 571, 850 00	18, 521, 960 00
Special Fund for redemption of Fractional Currency.....	8, 265, 412 00	10, 000, 000 00	.....	.....
Drafts Outstanding.....	1, 319, 793 05	1, 235, 709 91	3, 979, 232 69	1, 549, 071 97
Balance, including Bullion Fund.....	78, 724, 902 78	182, 845, 615 52	143, 977, 096 20	149, 281, 443 67
<b>Total .....</b>	<b>243, 681, 111 25</b>	<b>337, 424, 964 74</b>	<b>303, 485, 995 07</b>	<b>267, 676, 912 40</b>
<b>ASSETS.</b>				
Gold Coin and Bullion .....	107, 039, 528 85	136, 036, 302 20	169, 827, 571 29	135, 640, 185 77
Standard Silver Dollars.....	.....	12, 155, 205 00	31, 806, 774 00	47, 784, 744 00
Fractional Silver Coin .....	*7, 425, 453 94	6, 143, 903 02	16, 873, 898 47	24, 723, 892 68
Silver Bullion.....	.....	9, 634, 034 48	4, 299, 124 25	6, 154, 392 93
Gold Certificates.....	18, 934, 000 00	9, 392, 920 00	70, 700 00	31, 600 00
Silver Certificates .....	.....	1, 316, 470 00	3, 131, 130 00	6, 092, 579 00
United States Notes .....	74, 558, 308 23	63, 049, 339 67	48, 762, 728 01	27, 901, 594 07
United States Notes, Special Fund for redemption of Fractional Currency .....	8, 265, 412 00	10, 000, 000 00	.....	.....
National Bank Notes .....	14, 109, 541 51	9, 259, 043 81	4, 279, 958 76	3, 288, 404 57
National Bank Gold Notes .....	1, 720 00	1, 720 00	183, 640 00	220, 125 00
Fractional Currency.....	237, 203 64	161, 081 86	90, 978 15	60, 712 08
Deposits held by National Bank Depositories.....	10, 731, 025 90	75, 661, 403 15	17, 836, 816 48	11, 212, 315 94
Nickel and Minor Coin .....	870, 140 54	1, 410, 898 50	1, 524, 700 57	1, 063, 665 23
New York and San Francisco Exchange .....	333, 500 00	367, 000 00	1, 799, 334 51	1, 443, 000 00
One and Two Year Notes, &c.....	593 70	8, 916 51	400 40	325 50
Redeemed Certificates of Deposit (Act June 8, 1872).....	.....	1, 345, 000 00	2, 025, 000 00	90, 000 00



STATEMENT of LIABILITIES and ASSETS of the TREASURY, &c.—Continued.

	September 30, 1877.	September 30, 1878.	September 30, 1879.	September 30, 1880.
ASSETS—Continued.				
Quarterly Interest Checks and Coin Coupons paid.....	\$90,012 01	\$256,900 46	\$189,579 78	\$141,517 91
Registered and Unclaimed Interest paid.....	333,907 50	370,482 80	22,355 06	10,303 50
United States Bonds and Interest Interest on District of Columbia Bonds.....	6,562 48	1,345 64	507 64	997,343 81
Refunding Certificates and Interest Pacific Railroads, Sinking Fund.....			516 97	3,047 12
Speaker's Certificates.....	6,255 00	123,802 00	24,119 74	
Deficits, unavailable Funds.....	737,945 95	729,195 64	45,312 75	126,315 00
Total.....	243,681,111 25	337,424,964 74	690,848 30	690,848 30
			303,485,995 07	267,676,912 40

\* Fractional Silver Coin, and Silver Bullion.

It appears from the above table that the gold and silver coin and bullion ranged from \$114,464,982.79 in 1877 to \$163,969,444.70 in 1878, to \$222,807,368.01 in 1879, and to \$214,303,215.38 in 1880. The decrease of \$8,500,000 between 1879 and 1880 is represented by a reduction in the gold balance of \$34,000,000 and an increase in the silver coin and bullion on hand. The influences tending to the decrease of the gold balance have been, primarily, the scarcity of notes, compelling payments of the daily balance to the New York Clearing-House in gold coin. There has been but a small amount of United States notes and gold certificates presented for redemption in gold coin. There has been during the year an increase in silver coin of \$15,977,970 in standard dollars and of \$7,849,994.21 in fractional silver coin.

The note assets, including balances due from depositary banks, have decreased from \$107,664,287.64 in 1877 to \$93,417,282.91 in 1878, to \$63,926,653.25 in 1879, and to \$42,402,314.58 in 1880. The steady decrease is due in great measure to the withdrawal of notes, caused by the presentation of clearing-house certificates for redemption, the amount of these certificates outstanding having been reduced from \$31,335,000 in 1879 to \$9,975,000 in 1880. Another reason for the smallness of the note balance may be found in the falling off in note receipts, the revenues of the government being now largely paid in coin and in silver certificates.

From the following tables of assets and liabilities for November 1, 1879, and 1880, the changes in the funds can more readily be seen. They also show the excess of assets, constituting the reserve available for resumption purposes.

STATEMENT of the ASSETS and LIABILITIES of the GOVERNMENT, November 1, 1879.

ASSETS.	
Gold Coin in Treasury and Mints...	\$121,355,448 90
Gold Bullion.....	50,358,464 75
Silver Bullion.....	3,537,224 31
Standard Silver Dollars.....	32,322,634 00
Fractional Silver Coin.....	17,755,986 76
	\$225,329,758 72
United States Notes.....	49,537,815 74
Total.....	\$274,867,574 46

## LIABILITIES.

Called Bonds matured .....	\$24,271,506 95	
Less amount on hand .....	762 93	
		\$24,270,744 02
Interest due .....	9,704,299 49	
Less amount on hand .....	277,706 29	
		9,426,593 20
Gold Certificates .....	14,591,000 00	
Less amount on hand .....	213,400 00	
		14,377,600 00
Silver Certificates .....	6,135,850 00	
Less amount on hand .....	4,531,480 00	
		1,604,370 00
Certificates of Deposit (Act of June 8, 1872) .....	22,510,000 00	
Less amount on hand .....	2,315,000 00	
		20,195,000 00
Disbursing Officers' Balances .....		18,337,397 01
Outstanding Drafts and Checks .....		5,020,764 96
Five per cent. Redemption Fund .....		15,742,887 52
Fund for redemption of Notes of National Banks— failed, liquidating, and reducing circulation .....		13,052,124 25
Post-Office Department Account .....		1,793,049 26
		\$123,820,530 22
Available for Resumption .....		151,047,044 24

**STATEMENT of the ASSETS and LIABILITIES of the GOVERNMENT, November 1, 1880.**

## ASSETS.

Gold Coin in Treasury and Mints .....	\$60,210,179 75	
Gold Bullion .....	80,742,657 99	
Silver Bullion .....	6,043,367 37	
Standard Silver Dollars .....	47,084,459 00	
Fractional Silver Coin .....	24,629,489 89	
Deposits with National Bank Depos- itaries .....	\$8,550,467 82	
United States Notes .....	26,389,331 51	
		34,939,799 33
Total .....		\$253,649,953 33

## LIABILITIES.

Old Debt .....	\$816,585 07	
Less amount on hand .....	2,298 96	
		\$814,286 11
Called Bonds Matured .....	5,550,742 04	
Less amount on hand .....	507 64	
		5,550,234 40
Interest due .....	8,871,464 54	
Less amount on hand .....	323,755 46	
		8,547,709 08
Gold Certificates .....	7,454,500 00	
Less amount on hand .....	6,800 00	
		7,447,700 00
Silver Certificates .....	27,113,960 00	
Less amount on hand .....	7,333,719 00	
		19,780,241 00

Certificates of Deposit (Act of June 8, 1872) .....	\$8,775,000 00	
Less amount on hand .....	150,000 00	
		\$8,625,000 00
Disbursing Officers' Balances .....		20,170,794 19
Outstanding Drafts and Checks .....		3,106,882 65
Five per cent. Redemption Fund .....		15,369,491 18
Fund for Redemption of Notes of National Banks— failed, liquidating, and reducing circulation .....		20,825,767 25
Post-Office Department Account .....		1,814,833 86
		<u>\$112,052,939 72</u>
Available for Resumption .....		141,597,013 61

The amount of gold coin and bullion in the Treasury January 1, 1879, the date of resumption of specie payments, was \$135,382,639.42, and at this date it is \$140,952,837.74, a gain of \$5,570,198.32; and, in addition, there have accumulated in the Treasury \$47,084,459 in standard silver dollars.

The redemptions of United States notes in gold since the resumption of specie payments have aggregated \$11,963,336, as follows:

	1879.	1880.
January .....	\$1,571,725	\$71,500
February .....	909,249	72,080
March .....	952,766	43,020
April .....	699,773	16,000
May .....	1,339,883	51,000
June .....	2,503,302	47,200
July .....	954,800	25,000
August .....	981,400	22,000
September .....	603,485	150,000
October .....	740,295	9,000
November .....	77,499	.....
December .....	122,359	.....

Since the order of the Department of January 1, 1879, authorizing the receipt of United States notes for customs duties, there have been received on that account \$142,323,601, as follows:

	1879.	1880.
January .....	\$6,864,889	\$4,126,450
February .....	9,340,452	4,477,161
March .....	11,919,876	3,702,727
April .....	10,562,006	3,231,697
May .....	9,703,566	2,888,138
June .....	9,336,778	3,951,588
July .....	10,588,145	4,029,892
August .....	11,261,307	2,844,658
September .....	12,506,018	2,241,305
October .....	9,281,243	1,802,288
November .....	4,612,198	.....
December .....	3,051,219	.....

#### REFUNDING.

The refunding operations virtually ceased in September, 1879, by the closing of the loan accounts with depositary banks, though the conversion of ten-dollar refunding certificates into 4 per cent. consols of 1907 still continues. The receipts into the Treasury on account of the 5 per cent. funded loan of 1881, of the 4½ per cent. funded loan of 1891, and of the 4 per cent. consols of 1907, to October 31, 1880, aggregate, principal and interest, \$1,514,084,180.03, which was deposited in depos-

itary banks and at the various subtreasury offices as set forth in the following table :

With whom deposited.	Funded Loans of 1881 (5 per cent.).	Funded Loan of 1891 (4½ per cent.).	Funded Loan of 1907 (4 per cent.).
Treasurer U. S., Washington, D. C.....	\$270, 327, 152 73	\$128, 852, 831 21	\$109, 935, 498 21
Assistant Treasurer U. S., New York, N. Y.....	47, 914, 175 65	71, 258, 010 33	38, 526, 829 47
Assistant Treasurer U. S., Boston, Mass.....	1, 067, 002 37	1, 648, 000 00	847, 116 31
Assistant Treasurer U. S., Philadelphia, Pa.....	17, 104 69	.....	358, 486 77
Assistant Treasurer U. S., Baltimore, Md.....	.....	.....	322, 505 84
Assistant Treasurer U. S., Cincinnati, Ohio.....	16, 659 91	.....	2, 349, 448 89
Assistant Treasurer U. S., Chicago, Ill.....	618 30	.....	4, 582, 457 22
Assistant Treasurer U. S., Saint Louis, Mo.....	94, 806 71	.....	467, 447 94
Assistant Treasurer U. S., New Orleans, La.....	.....	.....	293, 791 67
Assistant Treasurer U. S., San Francisco, Cal....	142, 000 00	.....	8, 756, 108 75
Depositary U. S., Pittsburgh, Pa.....	1, 850 00	.....	.....
Depositary U. S., Santa Fé, N. Mex.....	10, 550 00	.....	.....
National Bank Depositaries.....	200, 959, 362 23	49, 590, 000 00	575, 744, 304 83
Total.....	520, 551, 342 59	251, 348, 841 54	742, 183, 995 90

The conversions of refunding certificates, amounting to \$39,367,857.69, are included in the sum of \$109,935,498.21, received by the Treasurer of the United States on account of the funded loan of 1907.

REFUNDING CERTIFICATES.

The amount of refunding certificates of the denomination of \$10 issued under the act of February 26, 1879, was \$40,012,750, including registered certificates. Up to this date there have been received for conversion into 4 per cent. bonds \$39,033,550 from 8,534 depositors, the average amount presented by each depositor being \$4,574. The amount outstanding at this date is \$979,200.

RETIREMENT OF BONDS.

There were redeemed and paid for by this office from November 1, 1879, to date, \$17,444,800 in called bonds upon which the interest had ceased, the proceeds of which, including interest, amounted to \$17,774,333.94.

There were also purchased on account of the sinking fund during the same period \$106,271,100 in United States bonds, the total cost of which, including interest and premium, was \$111,220,366.09.

UNITED STATES NOTES.

The following table shows the total amount of United States notes outstanding at the close of the fiscal years 1877, 1878, 1879, and 1880, by denominations. The fractional parts of a dollar and the odd amounts appearing therein arise from the discounting under the rules of the Department of mutilated notes redeemed.

Denomination.	1877.	1878.	1879.	1880.
One dollar .....	\$25, 100, 287 80	\$20, 929, 874 30	\$18, 209, 980 80	\$20, 332, 332 00
Two dollars.....	25, 369, 826 20	20, 910, 948 20	18, 092, 653 20	20, 352, 813 00
Five dollars.....	49, 338, 224 00	54, 069, 556 50	54, 107, 113 00	65, 432, 548 00
Ten dollars.....	64, 495, 717 00	65, 551, 644 00	64, 638, 562 00	74, 916, 751 00
Twenty dollars.....	62, 607, 197 00	62, 720, 643 00	60, 470, 887 00	72, 143, 207 00
Fifty dollars.....	35, 912, 910 00	27, 182, 680 00	25, 523, 340 00	24, 808, 995 00
One hundred dollars.....	29, 410, 170 00	31, 624, 670 00	32, 038, 480 00	32, 797, 870 00
Five hundred dollars.....	33, 884, 500 00	30, 878, 500 00	32, 569, 500 00	19, 224, 000 00
One thousand dollars.....	34, 585, 500 00	33, 212, 500 00	35, 070, 500 00	16, 532, 500 00
Five thousand dollars.....	.....	.....	4, 000, 000 00	680, 000 00
Ten thousand dollars.....	.....	.....	2, 960, 000 00	460, 000 00
Total.....	360, 764, 332 00	347, 681, 016 00	347, 681, 016 00	347, 681, 016 00
Destroyed in subtreasury in Chicago fire, denominations unknown.....	1, 000, 000 00	1, 000, 000 00	1, 000, 000 00	1, 000, 000 00
Outstanding.....	359, 764, 332 00	346, 681, 016 00	346, 681, 016 00	346, 681, 016 00

From the above it appears that, while the aggregate amount of notes outstanding has not changed, there has been an increase of \$2,122,351 in one dollar notes, \$2,260,160 in two dollar notes, \$11,325,435 in five dollar notes, \$10,278,189 in ten dollar notes, \$11,672,320 in twenty dollar notes, and \$759,390 in one hundred dollar notes; and a decrease of \$714,345 in fifty dollar notes, \$13,345,500 in five hundred dollar notes, \$18,538,000 in one thousand dollar notes, \$3,320,000 in five thousand dollar notes, and \$2,500,000 in ten thousand dollar notes; showing an increase of \$37,658,455 in notes of a less denomination than fifty dollars, and a corresponding decrease in the higher denominations. The notes of the denomination of five thousand and ten thousand dollars issued at the time of the suspension of the issue of gold notes are disappearing from circulation by being presented for redemption, and no more are being issued, the demand for them having virtually ceased.

The following table of issues and redemptions of United States notes during the fiscal years 1878, 1879, and 1880, shows the total redemption during those years, and the manner in which the changes in the denominations of outstanding notes were brought about:

Denomination.	1878.		1879.		1880.	
	Issued.	Redeemed.	Issued.	Redeemed.	Issued.	Redeemed.
One dollar .....	\$7, 562, 351	\$11, 792, 775	\$6, 503, 133	\$9, 223, 026 50	\$9, 057, 863 00	\$6, 935, 511 80
Two dollars.....	6, 288, 000	10, 746, 878	5, 892, 000	8, 710, 295 00	8, 232, 000 00	5, 971, 840 20
Five dollars .....	15, 820, 000	16, 111, 867	11, 060, 000	11, 622, 443 50	19, 680, 000 00	8, 354, 565 00
Ten dollars .....	11, 380, 000	12, 763, 063	9, 280, 000	10, 193, 082 00	16, 520, 000 00	6, 241, 811 00
Twenty dollars .....	9, 200, 000	9, 086, 554	7, 400, 000	9, 649, 756 00	17, 360, 000 00	5, 687, 680 00
Fifty dollars.....	3, 200, 000	6, 267, 030	2, 400, 000	4, 059, 340 00	1, 400, 000 00	2, 114, 345 00
One hundred dollars ..	6, 408, 600	4, 194, 100	5, 007, 709	4, 593, 890 00	3, 052, 700 00	2, 293, 310 00
Five hundred dollars .	4, 817, 000	4, 424, 000	5, 650, 000	3, 959, 000 00	2, 300, 000 00	15, 645, 500 00
One thousand dollars..	2, 600, 000	3, 973, 000	3, 900, 000	2, 042, 000 00	700, 000 00	19, 238, 000 00
Five thousand dollars..	.....	.....	4, 005, 000	5, 000 00	1, 000, 000 00	4, 320, 000 00
Ten thousand dollars .	.....	.....	3, 010, 000	50, 000 00	2, 000, 000 00	4, 500, 000 00
Total.....	67, 275, 951	80, 359, 267	64, 107, 833	64, 107, 833 00	81, 302, 563 00	81, 302, 563 00

There will be a decrease in the issues and redemptions during the current fiscal year, for the reason that there is so much difficulty in obtaining notes for redemption and exchange for other denominations that the amount of such exchanges now being made is much less than during the last fiscal year. The demand for notes is to a great extent being supplied by the issue of silver certificates of the denominations of ten and twenty dollars.

STANDARD SILVER DOLLARS.

The total coinage of standard silver dollars under the act of February 28, 1878, is \$72,847,750. Of this amount \$47,588,106 are in the Treasury and the mints, and \$25,259,644, being more than thirty-four and two-thirds per cent. of the coinage, are in circulation. The amount in circulation November 1, 1878, was \$4,922, 623, or twenty-six and nine-tenths per cent. of \$18,282,500 coined; at the same date in 1879 the amount in circulation was \$13,002,842, or twenty-eight and three-fourths per cent. of \$45,206,200 coined. Of the total amount coined to date \$47,602,932, or more than sixty-five per cent., has been paid out from the Treasury offices and mints. Of the amount paid out nearly forty-seven per cent., or \$22,343,288, has been returned to the Treasury in payment of dues or



on account of silver certificates. While the amount distributed is only about one-third of the amount coined, there were placed permanently in circulation, during the first seven full months of coinage, 4,731,684 standard silver dollars, or 675,955 each month, and for the succeeding twelve months ending October 31, 1879, there were absorbed into the circulation of the country 8,080,219 standard silver dollars, or 673,351 per month. During the twelve months just ended 12,256,802 standard silver dollars and \$18,175,871 in silver certificates entered into the circulation of the country, or an average of 1,021,400 standard silver dollars and \$1,514,656 in silver certificates each month.

The following table shows the amount coined, on hand, and outstanding at the close of each month since the coinage began:

Month.	Monthly coinage.	Coined to the end of the month.	Balance on hand at the close of the month.	Net distribution during the month.	Outstanding at the close of the month.
<b>1878.</b>					
March .....	\$1,001,500	\$1,001,500	\$810,561	\$190,939	\$190,939
April.....	2,470,000	3,471,500	3,169,681	110,880	301,819
May.....	3,015,000	6,486,500	5,950,451	234,230	536,049
June .....	2,087,000	8,573,500	7,718,357	319,094	855,143
July .....	1,847,000	10,420,500	9,550,236	15,121	870,264
August .....	3,028,000	13,448,500	11,292,849	1,285,387	2,155,651
September .....	2,764,000	16,212,500	12,155,205	1,901,644	4,057,295
October .....	2,070,000	18,282,500	13,359,877	865,328	4,922,623
November.....	2,156,050	20,438,550	14,843,219	672,708	5,595,331
December .....	2,057,000	22,495,550	16,704,829	195,890	5,790,721
<b>1879.</b>					
January.....	2,060,200	24,555,750	18,625,223	139,806	5,930,527
February.....	2,182,000	26,687,750	20,049,181	708,042	6,638,569
March.....	2,087,200	28,774,950	21,799,206	357,175	6,975,744
April.....	2,381,000	31,155,950	23,999,047	181,159	7,156,903
May.....	2,330,000	33,485,950	26,386,154	.....	7,009,796
June .....	2,315,050	35,801,000	28,358,589	285,508	7,442,411
July.....	1,650,000	37,451,000	29,347,201	661,388	8,103,799
August.....	2,787,050	40,238,050	30,962,254	1,171,997	9,275,796
September .....	2,396,050	42,634,100	31,806,774	1,551,530	10,827,326
October .....	2,572,100	45,206,200	32,203,358	2,175,516	13,002,842
November.....	2,490,000	47,705,200	33,503,888	1,198,470	14,201,312
December .....	2,350,450	50,055,650	33,327,352	2,526,786	16,728,098
<b>1880.</b>					
January.....	2,450,000	52,505,650	35,548,868	228,684	16,956,782
February.....	2,300,400	54,806,050	37,513,420	335,848	17,292,630
March.....	2,350,200	57,156,250	39,057,858	805,762	18,008,392
April.....	2,300,000	59,456,250	41,052,639	305,219	18,408,611
May.....	2,267,000	61,723,250	43,356,807	.....	18,366,448
June .....	2,011,500	63,734,750	45,108,206	222,843	18,626,454
July .....	2,280,000	66,014,750	47,073,470	314,826	18,941,280
August .....	2,253,000	68,267,750	48,230,477	1,095,993	20,037,273
September .....	2,301,000	70,568,750	47,784,744	2,746,733	22,784,006
October .....	2,279,000	72,847,750	47,568,106	2,475,638	25,259,644

In addition to the ordinary influences which facilitate the distribution of standard silver dollars, the demonetization by the people of the Southwest of the Mexican silver dollar has created an extensive demand for the new dollar in that quarter. Were the trade-dollar withdrawn from circulation or everywhere rated at its bullion value, many more standard silver dollars would be required for circulation in the cities of New York and Philadelphia, and in other places in which the trade-dollar is now in use as a circulating medium, much to the advantage of the bullion dealers, who purchase trade-dollars at points where they are rated at 90 cents and sell them at an advance to parties in places where they circulate at their face value.

## SILVER CERTIFICATES.

The total amount of silver certificates issued under the act of Congress of February 28, 1878, to September 30, 1880, is \$27,308,000; of which there were issued at Washington, \$10,080,000; at New York, \$4,428,000; and at San Francisco, \$12,800,000. There were in actual circulation at the latter date \$12,429,381, which amount does not include \$6,092,579 held in the cash of the various offices. The demand for silver certificates under the circular of the Department dated September 18, 1880, authorizing their exchange for gold coin or bullion has been quite extensive at New Orleans, Saint Louis, Chicago, and Cincinnati, and there were paid out at those points during the month of October \$3,485,000 in silver certificates for an equal amount of gold coin deposited in the subtreasury at New York. The demand was stimulated by the scarcity of other circulating notes, and because, the certificates being furnished at the various subtreasuries without expense for transportation to the person desiring them, they became an inexpensive means of obtaining exchange, which was really of great advantage in the Southwest.

The following table shows the amount of silver certificates outstanding June 30, 1879, issued and redeemed during the fiscal year and outstanding at its close:

Denomination.	Outstand- ing June 30, 1879.	Issued.		Redeemed.		Outstand- ing June 30, 1880.
		During fiscal year.	To June 30, 1880.	During fiscal year.	To June 30, 1880.	
Ten dollars .....	\$163, 830	\$2, 007, 000	\$2, 174, 000	\$23, 490	\$26, 660	\$2, 147, 340
Twenty dollars .....	95, 420	1, 890, 000	1, 996, 000	10, 540	11, 120	1, 974, 880
Fifty dollars .....	145, 000	1, 195, 000	1, 340, 000	11, 050	11, 050	1, 328, 950
One hundred dollars ..	475, 700	1, 449, 000	1, 930, 000	20, 100	25, 400	1, 904, 600
Five hundred dollars..	500, 000	750, 000	3, 018, 000	20, 500	1, 788, 500	1, 220, 500
One thousand dollars..	1, 160, 000	2, 727, 000	10, 570, 000	98, 000	6, 781, 000	3, 789, 000
Total .....	2, 539, 950	10, 018, 000	31, 018, 000	183, 680	8, 643, 730	12, 374, 270

## FRACTIONAL CURRENCY AND FRACTIONAL SILVER COIN.

The total amount of fractional silver issued under the act of April 17, 1876, was \$42,983,618.50; to which should be added at least 25 per cent. more represented by coins of dates prior to 1875 which have found their way into circulation since the resumption of specie payments. Of this coin there is in the Treasury at this date \$24,629,489.89, of which \$17,296,671.13 has been withdrawn from circulation since the passage of the act of June 9, 1879, providing for the exchange of fractional silver for lawful money. Since July 31, 1880, the amount in the Treasury has decreased about \$500,000, that amount in excess of redemptions having been reissued under a demand which has sprung up by reason of reduced transportation charges and an improved condition of business.

Under Department regulation of August 26, 1880, fractional silver coin has been sent at the risk and expense of the applicant by registered mail in four-pound packages, each containing \$70. Under this arrangement 796 packages have been sent.

At the date of the act of April 17, 1876, authorizing the exchange of fractional silver coin for fractional currency, there was in circulation \$41,508,737.48 of fractional currency, which, up to October 31, 1879,

had been decreased by redemption to \$15,710,964.24. Since that date there has been a further redemption, as shown by the following table, of \$153,164.54, or an average of \$12,763.71 per month, leaving the amount outstanding at this date \$15,557,799.70.

Month.	Fractional currency out-standing at close of each month.	Fractional currency re-deemed during each month.	Total redeemed to the end of each month.
1879.			
November.....	\$15,704,353 12	\$6,611 12	\$25,804,384 36
December.....	15,674,308 11	30,045 01	25,834,429 37
1880.			
January.....	15,068,734 29	5,573 82	25,840,003 19
February.....	15,631,315 41	37,418 88	25,877,422 07
March.....	15,625,301 33	6,014 08	25,883,436 15
April.....	15,604,591 33	20,710 00	25,904,146 15
May.....	15,592,938 70	11,652 63	25,915,798 78
June.....	15,590,892 70	2,046 00	25,917,844 78
July.....	15,581,648 70	9,244 00	25,927,088 78
August.....	15,557,933 70	23,715 00	25,950,803 78
September.....	15,557,878 70	55 00	25,950,858 78
October.....	15,557,799 70	79 00	25,950,937 78

#### MINOR COIN.

The Minor Coin in the vaults of the various offices September 30, 1880, amounted to \$1,063,665.22, having decreased to that amount from \$1,524,700.57 in the Treasury at the same date in 1879. The demand for five-cent nickels, which has amounted to \$455,810.80 during the year in excess of redemptions, has been supplied from the amount on hand; but the demand for bronze one-cent pieces still continues, and the Mint has been unable to fill the orders for that denomination promptly. The following table shows the distribution of the Minor Coin on hand in the Treasury September 30, 1880:

Office by which held.	Five-cent, nickel.	Three-cent, nickel.	Two-cent, bronze.	One cent, bronze, cop-per - nickel, and copper.	Mixed.	Total.
Washington.....	\$678 00	\$2,154 00	\$910 00	\$837 00	\$287 47	\$4,866 47
Baltimore.....	1,250 00	90 00	20 00	193 27	.....	1,553 27
New York.....	138,696 00	8,760 00	1,110 00	9,090 00	.....	157,656 00
Philadelphia.....	518,573 00	80,942 00	.....	30,430 00	.....	635,945 00
Boston.....	22,393 00	10,851 00	51 00	5,331 00	748 36	39,374 36
Cincinnati.....	9,606 00	4,900 00	275 00	260 00	.....	15,041 00
Chicago.....	5,100 00	7,720 00	220 00	65 00	5 29	13,110 29
Saint Louis.....	.....	.....	.....	.....	5,600 97	5,600 97
New Orleans.....	350 00	810 00	200 00	1,540 00	.....	2,900 00
San Francisco.....	9,000 00	1,950 00	200 00	850 00	.....	12,000 00
Tucson.....	.....	.....	.....	.....	1 38	1 38
Mint United States, Phila-delphia.....	22,796 15	19,445 04	7,274 62	125,006 51	1,025 00	175,547 32
Mint United States, Denver.....	.....	.....	.....	.....	69 16	69 16
Total.....	728,442 15	143,622 04	10,260 62	173,602 78	7,737 63	1,063,665 22

#### DEPOSITARY BANKS.

The total receipts of public money during the fiscal year by Depository Banks were \$119,493,171.94, the average daily balance therein being \$8,000,000, secured by the deposit in this office of \$14,777,000

United States bonds and personal bonds to the amount of \$330,000. The receipts of public money by Depositary Banks from 1864 to 1880 aggregate \$3,537,641,044.41. There were at the close of the fiscal year one hundred and thirty-one National Bank depositaries.

The following statement gives the receipts, disbursements, and balances of public money, as shown by the Treasurer's accounts with Depositary Banks, during the fiscal years from 1864 to 1880:

Fiscal year.	Receipts.	Funds transferred to depositary banks.	Funds transferred to the Treasury by depositary banks.	Drafts drawn on depositary banks.	Balance at close of the year.
1864	\$153,393,108 71	16,000 00	\$25,607,674 08	\$28,726,625 88	\$38,978,738 75
1865	987,564,619 14	10,294 70	583,097,912 72	415,887,787 81	36,065,002 06
1866	497,566,676 42	23,072 02	363,085,565 63	149,772,756 11	34,298,319 34
1867	351,737,063 83	05,903 67	331,039,872 57	37,218,612 76	28,182,821 47
1868	225,244,144 75	04,392 00	215,311,480 89	22,218,187 92	23,301,709 61
1869	103,100,573 67	52,190 44	114,748,877 24	14,890,463 75	8,875,141 73
1870	120,084,041 79	60,521 06	111,123,926 18	11,818,228 61	8,483,549 70
1871	99,299,840 85	33,120 45	89,428,544 04	13,790,261 01	7,197,015 04
1872	100,104,855 16	50,444 03	94,938,603 76	13,635,837 49	7,777,873 00
1873	186,602,743 98	04,842 49	108,080,786 78	16,110,519 07	62,185,153 64
1874	91,108,846 70	39,938 81	134,869,112 57	13,384,554 52	7,790,292 06
1875	98,228,249 53	37,443 00	82,184,304 05	13,637,676 25	11,914,004 89
1876	97,402,227 57	43,451 40	89,081,146 99	13,209,616 83	7,870,920 13
1877	106,470,261 22	53,196 29	94,276,400 35	14,862,200 88	7,555,776 41
1878	99,781,053 48	65,920 36	90,177,963 35	12,600,870 60	6,937,916 23
1879	109,397,525 67	90,489 06	100,498,469 29	15,544,058 34	7,183,403 42
1880	119,493,171 94	89,634 17	109,641,232 64	15,526,023 03	7,999,853 86
Total	3,537,641,044 41	92,499,796 24	2,798,600,852 93	823,540,032 86	.....

#### CLEARING-HOUSE CERTIFICATES.

The following table shows the amount of Clearing-House Certificates issued, redeemed and outstanding for the fiscal years 1873 to 1880, inclusive. The total amount issued is \$601,785,000, of which amount there was outstanding at the close of the year only \$13,125,000, being by far the smallest amount outstanding since their first issue in 1873, and indicating the demand for United States notes by the banks and the increased use by them of coin for their reserves.

Fiscal year.	Total amount issued.	Total amount redeemed.	Outstanding, as shown by the Treasurer's books.
1873	\$57,340,000	\$25,430,000	\$31,910,000
1874	137,905,000	78,915,000	58,990,000
1875	212,000,000	159,955,000	52,045,000
1876	301,400,000	268,200,000	33,140,000
1877	378,285,000	324,305,000	53,980,000
1878	464,965,000	418,720,000	46,245,000
1879	554,780,000	525,400,000	29,380,000
1880	601,785,000	588,660,000	13,125,000

#### SALES OF EXCHANGE.

For the purpose of supplying those offices with funds, there was sold at the New Orleans subtreasury, \$250,000 of New York exchange; at the San Francisco subtreasury, \$6,690,000 of New York exchange, and by the depositary at Tucson, \$123,500 of New York and San Francisco exchange, which was furnished to them from this office, by the Treasurer's checks on New York and San Francisco.

## GOLD CERTIFICATES.

The issue of Gold Certificates was suspended by the Department December 1, 1873, at which time there had been issued \$981,134,880.46. Of that amount there was outstanding at the close of the fiscal year but \$8,004,600. The following table shows the amount issued and redeemed during each fiscal year from 1866 to 1880, inclusive, the total issued and redeemed, and the amount outstanding at the close of each year:

Period.	Issued during the fiscal year.	Total issued.	Redeemed during the fiscal year.	Total redeemed.	Outstanding at the close of the fiscal year.
From November 13, 1865, to June 30, 1866.....	\$98,493,660 00	\$98,493,660 00	\$87,545,800 00	\$87,545,800 00	\$10,947,860 00
Fiscal year 1867.....	109,121,620 00	207,615,280 00	101,295,900 00	188,841,700 00	18,773,580 00
Fiscal year 1868.....	77,960,400 00	285,575,680 00	79,055,340 00	207,897,040 00	17,678,640 00
Fiscal year 1869.....	80,603,160 00	366,238,840 00	65,255,620 00	333,152,660 00	33,086,180 00
Fiscal year 1870.....	70,731,000 00	442,969,900 00	75,270,120 00	408,422,780 00	34,547,120 00
Fiscal year 1871.....	56,577,000 00	499,546,900 00	71,237,820 00	479,660,600 00	19,886,300 00
Fiscal year 1872.....	63,229,500 00	562,776,400 00	51,029,500 00	530,690,100 00	32,086,300 00
Fiscal year 1873.....	55,570,500 00	618,346,900 00	48,196,800 00	578,886,900 00	39,460,000 00
Fiscal year 1874.....	81,117,780 46	699,464,680 46	97,752,680 46	676,639,580 46	22,825,100 00
Fiscal year 1875.....	70,250,100 00	769,714,780 46	71,278,900 00	747,918,480 46	21,796,300 00
Fiscal year 1876.....	90,619,100 00	860,333,880 46	83,734,000 00	831,652,480 46	28,681,400 00
Fiscal year 1877.....	58,141,200 00	918,475,080 46	45,250,000 00	876,902,480 46	41,572,600 00
Fiscal year 1878.....	50,342,400 00	968,817,480 46	47,548,000 00	924,450,480 46	44,367,000 00
Fiscal year 1879.....	12,317,400 00	981,134,880 46	41,270,700 00	965,721,180 46	15,413,700 00
Fiscal year 1880.....	.....	981,134,880 46	7,409,100 00	973,130,280 46	8,004,600 00

## DRAFTS AND CHECKS.

There were drawn during the year 296,936 checks in payment of quarterly interest on registered stock of the United States, 31,385 drafts on warrants of the Secretary of the Treasury, 13,945 drafts on warrants of the Postmaster-General, and 66,059 transfer checks on assistant treasurers, making in all 408,325.

## MUTILATED, STOLEN, AND COUNTERFEIT CURRENCY.

There were rejected, branded, and returned to the owners during the fiscal year \$3,610 in counterfeit United States notes, \$3,842 in counterfeit national-bank notes, and \$770.10 in counterfeit fractional currency. Of the counterfeit bank-notes rejected \$1,200 was in notes of the denomination of \$100, purporting to be of the issue of the following national banks: First National Bank of Boston, \$300; Central National Bank of New York, \$100; National Revere Bank of Boston, \$300; and Pittsburgh National Bank of Commerce of Pittsburgh, Pa., \$500. The two last-mentioned counterfeits are printed from the same original plate and are by far the most difficult of detection of any which have yet appeared. Fortunately, the person by whom the plate was engraved has been recently arrested, and it is hoped that the further printing or putting in circulation of counterfeits printed from it will be prevented. There were also rejected \$7,870.23 in stolen, pieced, and fragmentary national-bank notes. There was deducted on account of mutilations from the face value of United States notes redeemed during the fiscal year \$10,157; from fractional currency, \$430.73; and from notes of failed liquidating, and reducing banks, \$80; making the total deductions to the close of the fiscal year \$297,363.76 on notes of the face value of \$2,229,368,462.17 redeemed. The deductions made prior to May 11,



1875, amounting to \$229,824.09, have been covered into the Treasury, increasing by that amount the redemptions, as shown by the cash statements, and decreasing the outstanding, as shown by the public debt statements.

#### PACIFIC RAILROAD SINKING FUNDS.

There are held at this date on account of the Pacific Railroad Sinking Funds, established by the act approved May 7, 1878 (20 Statutes, 56), bonds as follows:

For the Union Pacific Railroad Company:	
Pacific Railway bonds, currency sixes .....	\$192, 000
Funded Loan of 1881, 5 per cent.....	256, 450
Funded Loan of 1907, 4 per cent .....	31, 950
	<hr/> \$480, 400
For the Central Pacific Railroad Company:	
Pacific Railway bonds, currency sixes.....	\$119, 000
Funded Loan of 1881, 5 per cent.....	194, 900
Funded Loan of 1907, 4 per cent.....	198, 300
	<hr/> \$512, 200

The third section of the act provides that in making investments for these funds, the Secretary of the Treasury "shall prefer the five per centum bonds of the United States, unless, for good reasons appearing to him, and which he shall report to Congress, he shall at any time deem it advisable to invest in other bonds of the United States."

Attention is invited to the disadvantage of investing these sinking funds in the bonds of the United States at the present high market rates, and it is suggested that the consent of Congress, by joint resolution, be obtained to the purchase for the purpose of any bonds of the United States, or of the first-mortgage bonds of the two railroad companies, authorized by section 10 of the act of Congress of July 2, 1864 (13 Statutes, 356), and section 1 of the act of Congress of March 3, 1865 (13 Statutes, 504), which are the only liens upon the property of those companies prior and paramount to that of the United States.

#### TRUST FUNDS.

##### *The Indian Trust Fund.*

The bonds and stocks of the Indian Trust Fund, at the close of the fiscal year, in the custody of this office in conformity with the act of Congress of June 10, 1876 (19 Statutes, 58), amounted to \$4,580,216.83½. Of this amount \$2,469,400 was in United States bonds, as follows:

Loan of July and August, 1861 .....	\$500
Pacific Railway bonds, currency sixes.....	280, 000
Funded loan of 1881, 5 per cent .....	2, 188, 900
	<hr/>
Total.....	2, 469, 400

United States four per cent. bonds, of the face value of \$496,350, held for the Indian Trust Fund were sold on April 8, 1880, and the proceeds, amounting to \$531,349.47, deposited in the Treasury of the United States to the credit of the Secretary of the Interior as trustee of various Indian tribes, in accordance with the act of Congress approved April 1, 1880, authorizing that officer to deposit certain funds in the United States Treasury in lieu of investment.

Bonds of the Richmond and Danville Railroad Company belonging to this fund, amounting to \$103,500, were redeemed by that company

on the 28th day of February, 1880, and the amount, together with \$946 accrued interest, was deposited in the Treasury to the credit of the Secretary of the Interior, trustee of various Indian tribes.

*American Printing-House for the Blind.*

Under the act of March 3, 1879 (20 Statutes, 467), \$250,000 United States four per cent. bonds are held in the name of the Secretary of the Treasury, trustee, "to promote the education of the blind," the interest on which is paid to the trustees of the American Printing-House for the Blind, in Louisville, Ky., in conformity with that act.

*Pennsylvania Company.*

Under the provisions of Department Circular No. 146, dated November 29, 1876, \$200,000 in registered bonds of the funded loan of 1891 are held in trust for the Pennsylvania Company for the security of unappraised dutiable merchandise and dutiable merchandise in bond.

*Manhattan Savings Institution.*

Duplicates of United States bonds alleged to have been stolen from the vaults of the Manhattan Savings Institution are held in this office to the amount of \$250,000 to protect the United States from loss, as provided by the act of December 19, 1878 (20 Statutes, 539).

SEMI-ANNUAL DUTY.

The semi-annual duty assessed upon, and collected from, the national banks by the Treasurer of the United States for the fiscal year 1880 is as follows:

On circulation .....	\$3,153,635 63
On deposits .....	4,058,710 61
On capital .....	379,424 19
Total .....	7,591,770 43

This is the largest amount of semi-annual duty that has been assessed and collected for any year since the establishment of the national banking system, and exceeds the amount for the fiscal year 1879 by \$870,533.76.

The total amount of semi-annual duty collected by this office from the national banks for the fiscal years 1864 to 1880, as more fully set forth in the appendix, is—

On circulation .....	\$45,941,161 93
On deposits .....	47,703,404 11
On capital .....	6,716,903 31
Total .....	100,361,469 35

THE REDEMPTION OF NATIONAL-BANK NOTES.

The redemptions of national-bank notes fell off greatly during the fiscal year, the gross amount received for redemption having been only \$61,585,675.68, as compared with \$157,656,644.96 in 1879. The redemptions under the present system reached the highest point yet attained in 1877, when the amount redeemed was \$242,885,375.14, or nearly four times as great as in 1880. The amount of notes fit for circulation re-

deemed fell off from \$112,293,000 in 1879 to \$24,977,600 in 1880; of notes unfit for circulation from \$40,162,000 to \$29,860,000, and of notes of failed, liquidating, and reducing national banks from \$8,281,550 to \$6,500,800. The chief part of the reduction took place in the notes fit for circulation, the amount for the first time since 1875 being less than that of the unfit notes redeemed. On the other hand, the redemptions of notes of failed, liquidating, and reducing banks—the expense of which is chiefly borne by the other national banks—show a relatively small falling off. The number of notes assorted was 7,576,175 against 18,295,558 in 1879. Of these 2,435,663 were fit, and 5,140,512 unfit for circulation, the average denomination of the former being \$10.25 and of the latter \$5.81. In accordance with the requirements of section 5175 of the Revised Statutes, no incomplete notes of a less denomination than five dollars have been furnished to national banks by the Comptroller of the Currency since the resumption of specie payments, although all one and two dollar notes fit for circulation redeemed by the Treasurer have been returned to the banks of issue as heretofore. The proportion of such notes returned during the last year was, however, very small, only \$132,740 out of \$1,337,860 in ones and \$90,120 out of \$919,370 in twos redeemed having been found to be fit for circulation.

The great decrease in bank-note redemptions during the last two years is, in the Treasurer's opinion, due to two causes—the general revival of business, and the changes in the regulations requiring the charges for the transportation of all notes other than those clearly unfit for circulation to be paid by the senders. The former is probably the more potent influence. The redemptions of bank notes under the act of 1874 have always been in inverse proportion to the activity of business, being heavy when business is dull, and light when business is active. Prior to the resumption of specie payments, great accumulations of bank notes took place in the principal cities—especially in New York and Boston—during the winter and summer months, when business in the interior was duller. The interior banks having no other use for the bank notes which flowed into their vaults sent them to their city correspondents for their credit, interest being paid in most cases on the current balances. These notes, being unavailable for the national-bank reserves or for the settlement of balances at the clearing-house, were at once forwarded by the city banks to this office for redemption in legal-tenders, the conversion under the regulations then in force being made without any expense to the holders. Recently, however, there has been an almost complete cessation of the accumulation of bank notes in the money centers, and there has been a dearth rather than a plethora of both legal-tenders and bank notes in the principal cities. They have been absorbed by the demands of business and are in active circulation throughout the country. The consequence has been a great falling off in the receipts of bank notes for redemption from those sources. The receipts of bank notes from New York fell off from \$66,273,000 in the fiscal year 1878 to \$54,170,000 in 1879 and to \$26,460,000 in 1880. The decrease in the amount received from Boston was much greater. The receipts from that city in 1880 were only \$11,701,000, against \$80,527,000 in 1878, and \$59,375,000 in 1879. The aggregate receipts from the two cities in 1880 were but a little more than one-fourth of the receipts from those sources in 1877 and in 1878.

But while the revival of business and the increased activity of the circulation have been the chief cause of the decrease in redemptions, the changes in the regulations have not been without their effect. Prior to October 1, 1878, all of the charges for transportation incurred in the

redemption of bank notes, under the act of 1874, were defrayed out of the five per cent. redemption fund, and afterwards assessed upon the several national banks in proportion to the circulation of each redeemed. The charges thus assessed were those for the transportation of national-bank notes to the Treasurer for redemption in sums of \$1,000 or its multiples, and of legal-tender notes returned for them, as well as of the redeemed and assorted notes fit for circulation forwarded to the several banks by which they were issued. On and after October 1, 1878, by direction of the Secretary, the express charges on all national-bank notes forwarded to the Treasurer for redemption were required to be paid by the senders. This requirement was subsequently so modified as to permit the payment out of the five per cent. fund of the charges on notes unfit for circulation received for redemption after December 1, 1879. This modification was made in the expectation that it would cause an increase in the redemption of unfit notes, and thus improve the condition of the currency; but it has wholly failed of its intended effect, the redemptions under the modified order being for ten months only \$26,651,000, against redemptions of \$31,487,400 for the corresponding ten months of the previous year, under the rule requiring all the charges to be defrayed by the senders. Whatever the cause, there is no doubt that the condition of the bank circulation has deteriorated within the last two years. Most of the notes received for redemption are badly worn, and ought to have been redeemed much earlier. The labor and annoyance of assorting the notes unfit for circulation from the currency coming into their hands, and of holding them until an amount accumulates sufficient to be forwarded to the Treasurer, seems to deter many banks from returning them for redemption. The notes, consequently, remain in circulation long after they have become unfit for use, to the great inconvenience of all persons handling them.

In view of this condition of the currency, a return to the system under which all of the charges for transportation incurred in the redemption of national-bank notes were defrayed out of the five per cent. fund and assessed upon the banks might be advisable as the only way in which the circulation can be kept in good condition. Such a course, it is believed, would not be in conflict with the law.

Although every endeavor has been made to reduce the costs of redemption, and although every item of expense has been curtailed, it was impossible, for manifest reasons, to reduce the cost in the same proportion in which the work fell off. Among these reasons are the greater proportion of mutilated notes received, which are much more difficult to handle than new notes; the smaller size of the packages, the number of packages received during the last year having been nearly three-fourths as great as in the preceding year, although the amount contained in them was less than two-fifths as much; the great fluctuations in the amounts received from month to month; the increase in the proportion of notes of failed, liquidating, and reducing banks, on which no assessment can be levied, constituting as they did 10.6 per cent. of the redemptions in 1880, against a little more than five per cent. in 1879; the fact that the clerical and bookkeeping work has not decreased to anything like the extent to which the amount redeemed has fallen off, and, generally, the impossibility of doing a small business as economically as a large one. Notwithstanding these drawbacks, the amount paid for salaries in the office of the Treasurer was reduced from \$111,736.30 in 1879 to \$82,144.88 in 1880. The amount paid on this account in the office of the Comptroller of the Currency was \$22,205.20, making a total of \$104,350.08 paid for salaries in the year 1880. The amount appropriated for "the



force employed in redeeming the national currency" in the Treasurer's office was \$101,584, of which \$19,439.12, or more than 19 per cent. was unexpended. In every year since appropriations began to be made for this force in the Treasurer's Office a part of the amount appropriated has been returned to the Treasury. The amounts so returned were \$12,238.62 in 1876, \$1,955.52 in 1877, \$3,453.25 in 1878, \$5,447.70 in 1879, and \$19,439.12 in 1880, making a total saving on this account alone of \$42,534.21 in five years. The amount appropriated for this purpose for both offices for the fiscal year 1881 is \$90,872, being \$32,932 less than the amount appropriated for 1880, and \$13,478.08 less than the amount expended in that year. The number of persons now actually employed on this work in the Treasurer's office is 59, as compared with 152 so employed in 1876.

The total "costs for assorting" were \$108,964.15, against \$142,651.20 in 1879, a reduction having been made in every item. The "charges for transportation" were \$34,764.24, against \$98,298.75 in 1879. The total expenses of redemption were \$143,728.39, being \$97,221.56 less than in the preceding year—a reduction of more than 40 per cent. The "costs for assorting" when assessed as heretofore on the net number of notes assorted, were \$14.38½ for each thousand notes, and the "charges for transportation" 63.12½ cents for each \$1,000 assorted. The latter rate shows a slight reduction as compared with the previous year, notwithstanding the large proportion of unfit notes, the charges on which were paid out of the five per cent. fund. The total expenses were about ⅓ of 1 per cent. on the amount redeemed and charged to the banks of issue, and but a little more than ⅓ of 1 per cent. on the total circulation of the national banks. The latter percentage properly expresses the cost of the redemption system to the national banks. It is, on an average, \$37.69 for banks of \$90,000 circulation—a burden so slight as to be scarcely appreciable.

#### THE REDUCTION AND INCREASE OF NATIONAL-BANK CIRCULATION.

Attention is invited to the practical bearing on the question of bank-note redemption of the construction heretofore placed by the Department on the various provisions of law authorizing the reduction and increase of the circulation of national banks. The fourth section of the act approved June 20, 1874 (18 Statutes, 124), authorizes any national bank, desiring to withdraw its circulating notes, to take up the bonds deposited for the security of such notes, upon the deposit of lawful money with the Treasurer of the United States, and provides that an equal amount of the outstanding notes of the bank shall be redeemed at the Treasury of the United States. The banks have availed themselves of the privilege accorded by this provision to a very large extent, more than \$85,000,000 of circulation having been surrendered in the manner prescribed, and nearly \$71,000,000 having been redeemed at this office. The notes are received at the Treasury mixed with other bank notes, and if they come from assistant treasurers, or in packages marked "unfit," the express charges on them are defrayed out of the five per cent. redemption fund. They necessarily pass through the various stages of counting and assorting before they can be separated from the other notes, so that almost the entire expense of the redemption of the whole \$71,000,000 has been borne by the other national banks, there being no means of charging the "reducing" banks with the expenses of redeeming their notes until their deposits of legal-tender notes are exhausted.

This provision was adopted in the expectation that it would act as a regulator of the volume of the bank circulation. It was expected that



when the circulation became redundant, the surplus would be retired, and that when a demand for more circulation should spring up, the banks would increase their issues to meet it. This expectation has not been realized. The almost invariable answer to inquiries made of officers of banks which have reduced their circulation has been, that the reduction was made solely to enable the bank to avail itself of the ruling premium on the bonds withdrawn, either because the bonds were exceptionally high, or because the bank needed the premium to enable it to meet losses sustained, or to reduce its premium account. It is plain that the action of the banks would not be affected by the fact that the volume of the circulation was redundant, for the simple reason that a bank has more money at its disposal after reducing its circulation than before. A bank which deposits \$45,000 to reduce its circulation and takes up \$50,000 of its bonds, which it sells for ten per cent. premium, has \$10,000 more to lend than it had before. While, therefore, the retirement of the bank circulation diminishes the aggregate volume of the circulation, it increases the loanable funds of the particular bank whose circulation is reduced.

Under the construction placed upon the law, banks which have thus reduced their circulation have been permitted to increase it again as often and as largely as they chose, whether their legal-tender deposits were exhausted or not. Although the exact amount cannot be ascertained, it is safe to say that many millions of dollars of additional circulation have been issued under the general provisions of the national currency act to banks which were still reducing their circulation under the act of June 20, 1874. The consequence has been that the new notes thus issued have, to a large extent, speedily been presented to the Treasury for redemption out of the legal-tender deposit. Banks which have applied in vain to the Treasurer for the surrender of their legal-tender deposits, have accomplished the same object by obtaining new circulation. The cost of printing the new notes thus issued is borne by the United States, so that the government, though not deriving the remotest benefit from the transaction, has been obliged to bear the whole expense of their issue, and a part of the expense of their redemption, simply to enable a bank to do by indirection what it was not permitted to do directly. In several instances banks have repeated the operation of reducing and increasing their circulation several times within a brief period, taking up their bonds and selling them, it would appear, whenever the premium constituted a sufficient inducement, and increasing their circulation again whenever bonds could be bought at better rates, the United States all the while redeeming their notes at its own expense or that of the other banks, and issuing others, also at its own expense, whenever called upon by them.

An example will better illustrate these operations. In January and February, 1875, a certain bank reduced its circulation from \$308,490 to \$45,000 by deposits of legal-tender notes. Between September 26, 1876, and May 26, 1877, and before that deposit was exhausted, it increased its circulation to \$450,000. Between August 14 and September 10, 1877, it again reduced its circulation to \$45,000. On September 19, 1877, nine days after completing the deposits for this reduction, it again began to take out additional circulation, although \$402,550 of prior deposits remained in the Treasury, and by the 26th of that month its circulation had again been increased to \$450,000. July 22, 1878, it, for the third time, reduced its circulation to \$45,000, and in August and September, 1879, again increased it to \$450,000, at which it now remains, the balance of its former

legal-tender deposit then in the Treasury being \$112,615. From January 13, 1875, to the date of this report, \$778,275 of its notes have been redeemed, of which only \$40,700 were redeemed at the expense of the bank, although, during more than one-third of that period, it had outstanding and was deriving the benefit from the full amount of circulation which its capital authorized. The only assessments which have been made on the bank for the expenses of redeeming its notes were \$24.74 in 1875, and \$4.39 in 1878. At one time there were in actual circulation \$852,550 of its notes, although the highest amount ever borne on its books was \$450,000.

Other banks have reduced and forthwith increased their circulation to its former amount, with the avowed object of relieving themselves from the trouble and expense of redeeming their notes through the five per cent. redemption fund. For example, a bank deposited \$45,000 in legal-tender notes for the reduction of its circulation on April 3, 1878, and on April 5, 1878, two days afterwards, without having touched the bonds deposited as security, took out \$45,000 of additional circulation. In like manner on July 11, 1879, it deposited \$9,000 for the same purpose, and on the very same day, without disturbing its bonds, it took out \$9,000 of additional circulation.

It is plain that such transactions as these are not within the spirit of the act of June 20, 1874. That act authorizes the deposit of legal-tender notes by any national bank "desiring to withdraw its circulation, in whole or in part." A wish to surrender circulation, with the reserved intention of taking out more at once, or as soon as a fall in the price of bonds shall make the transaction profitable, is not, it is submitted, such a desire to withdraw circulation as the law contemplates. The reduction of circulation therein authorized is a *bona fide* reduction, based on a well-settled intention of the bank to curtail its note issues. It could neither have been intended nor expected that the law would become the means of enabling banks to operate in the securities of the government deposited to secure the redemption of their notes, or to throw upon the United States, or the other banks of the country, the expense of redeeming their notes; while maintaining and enjoying the full circulation to which the law entitles them. Such a construction utterly perverts the original intention of the act. Instead of the volume of the circulation being regulated by the business needs of the country, it is governed by the price of United States bonds. The price of bonds may be such as to induce banks to surrender their circulation at the very time when there is a legitimate demand for more circulation. The profit to be derived from taking up and selling their bonds may be greater than that derivable from their circulation. Within the last year a large reduction of bank circulation has taken place in the face of an active demand for money, simply because a good profit could be made by withdrawing and selling the four per cents. deposited as security for circulation. Nearly twenty-five million dollars in four per cent. bonds were thus withdrawn during the last fiscal year. Banks can afford to forego the profit on their circulation for a few months, in order to realize more from the premium on their bonds. Such operations should not, in the Treasurer's opinion, be permitted. A bank, having signified an intention to reduce its circulation, and having acted on that intention by depositing legal-tenders for the purpose, should be held to its determination until the deposit is exhausted. It should not be permitted to increase its circulation until it had disappeared from the category of "reducing" banks on the books of the Department, or to extend its note issues through one branch of the Department at the same time that they are being redeemed and destroyed

through another. The adoption of this construction, while it would work no injustice to any legitimate interest, would confine the operation of the fourth section of the act of June 20, 1874, to cases where banks had formed a well-considered intention to permanently curtail their circulation, and would relieve the United States from the expense of issuing notes to banks, only to have them forthwith returned for destruction.

It is equally clear that where additional circulation has been issued to reducing banks the new notes ought not to be redeemed out of the legal-tender deposits previously made. The law provides for the redemption out of those deposits of the "outstanding notes" of the association, plainly meaning the notes outstanding at the time the deposit is made. The deposit has relation only to the notes then outstanding. It would be absurd to suppose that the law intended to permit a bank to deposit legal-tenders to-day to redeem new notes issued to it to-morrow on a fresh deposit of bonds, or on the self-same bonds. The additional notes issued stand by themselves. They are properly subject to the same provisions as to their redeemability as the notes of a bank which has made no legal-tender deposit. The United States has no concern with them, and should, if practicable, refuse to redeem them when presented for redemption out of the bank's legal-tender deposit. All "reducing" banks are required to maintain a five per cent. deposit under section 3 of the act of June 20, 1874, on the circulation borne on their books—that is, the circulation for the redemption of which no legal-tender deposit has been made. Any part of the additional circulation of such a bank presented for redemption should be charged to its five per cent. account, and be reimbursed for and disposed of in the same manner as the notes of banks not reducing their circulation.

#### THE PROPORTION OF BONDS OF NATIONAL BANKS TO CAPITAL.

An important question was raised by the Treasurer during the year concerning the surrender to national banks of the bonds deposited by them with him to secure the redemption of their circulating notes, and as the reasons for his action do not appear to have been fully understood, a brief statement of them may not be out of place here. Section 5159 of the Revised Statutes requires that "every [national banking] association \* \* \* shall transfer and deliver to the Treasurer of the United States any United States registered bonds bearing interest to an amount not less than thirty thousand dollars and *not less than one-third of the capital stock paid in.*" Section 5160 provides that "the deposit of bonds made by each association shall be increased as its capital stock may be paid up or increased, so that every association shall at all times have on deposit with the Treasurer registered United States bonds to the amount of *at least one-third of its capital stock actually paid in.*"

Section 4 of the act of June 20, 1874, provides "that any association \* \* \* desiring to withdraw its circulating notes, in whole or in part, may, upon the deposit of lawful money with the Treasurer of the United States in sums of not less than nine thousand dollars, take up the bonds which said association has on deposit with the Treasurer for the security of such circulating notes; \* \* \* *Provided, That the amount of the bonds on deposit for circulation shall not be reduced below fifty thousand dollars.*" It was assumed immediately upon the passage of this act, apparently without any thorough consideration of the question, that it virtually repealed the above-quoted provisions of

the Revised Statutes requiring the amount of bonds on deposit for each bank to be equal to one-third of its capital stock, and that any bank, however large its capital, might reduce its bond deposit to \$50,000. Under this construction of the law there were surrendered to banks bonds to a considerable amount which they would not have been permitted to withdraw had the provisions of the Revised Statutes been treated as being in force. The present Treasurer's attention having been called to the various provisions above quoted, he came to the conclusion, upon the fullest consideration and after taking the best advice available to him, that the practice that had been followed was erroneous; that the provisions of the Revised Statutes were still in full force, and that the only effect of the proviso to section 4 was to prevent national banks having a less capital than \$150,000 from reducing their deposit below \$50,000, as they might have done had there been no limitation other than that fixed by the Revised Statutes.

Having come to this conclusion, the Treasurer deemed it his duty to obtain an authoritative decision of this question, which concerned the administration of his office. The contemplated loan by the government, at a low rate, for the purposes of funding, coupled with the provision in the bill then pending that national banks should hold and use the proposed bonds as security, made it important that the decision should be obtained at that time in order to determine to what extent the bonds might be so used. With this view he declined to allow the withdrawal of bonds on an application of a bank in an instance in which the withdrawal would have reduced its bond deposit below one-third of its capital stock; and with the concurrence, and at the suggestion of the Secretary, the point was at once submitted to the Attorney-General for his construction of the law.

The conclusion reached by the Attorney-General was that, as sections 7, 8, and 9 of the act of 1874 "treated the one-third policy as no longer existing," in that they provided for a compulsory withdrawal of circulation and a surrender of bonds which, in certain cases, might reduce the deposits below one-third of the capital stock, section 4 of that act is therefore "repugnant to section 5160 of the Revised Statutes and all other previous legislation that requires national banks to have and maintain in the Treasury of the United States a bond deposit equal to the amount of one-third of their capital stock."

This decision has of course governed the Treasurer's action, and no attempt has since been made to enforce the requirements of section 5160.

Very respectfully,

JAS. GILFILLAN,  
*Treasurer of the United States.*

HON. JOHN SHERMAN,  
*Secretary of the Treasury.*

## APPENDIX.

## No. 1.—RECEIPTS and EXPENDITURES, as shown by WARRANTS, for the FISCAL YEAR 1890.

Receipts, covered in to the credit of—	Issue of notes and bonds.	Net receipts.	Repayments to appropriations.	Counter-credits to appropriations.	Total.
Customs .....		\$180,522,004 00	\$290,861 46	\$52,112 40	\$180,873,128 46
Internal Revenue .....		124,000,373 92	14,102 99	550 00	124,024,026 91
Lands .....		1,016,506 00			1,016,506 00
Miscellaneous Sources .....		21,978,605 86			21,978,605 86
Total Net Revenue .....		\$33,520,510 98			
Public Debt—					
Funded Loan of 1907 .....	\$72,450,000 00				
Silver Certificates .....	10,091,000 00				
Certificates of Deposit (act of June 8, 1872) .....	47,455,000 00				
Refunding Certificates .....	614,840 00				
United States Notes .....	31,302,563 00				
		211,814,103 00			211,814,103 00
			720,274 10		720,274 10
			1,351,195 45		1,541,774 44
			1,716,741 41	190,578 99	6,540,965 01
			1,792,125 20	5,824,233 59	7,819,321 47
			43,675 41	27,190 17	56,803 96
			1,094,944 71	12,928 54	2,505,284 41
			12,319 70	810,330 09	50,216 94
			76,555 94	37,697 18	97,128 09
Total Receipts .....		\$45,340,713 98	6,720,836 58	6,976,390 31	\$58,037,909 87
Balance, as shown by warrant ledger, June 30, 1879 .....					858,682,846 09
Total .....					917,721,845 96
Expenditures, authorized by warrants from appropriations on account of—		Not expended.	Repayments of amounts unexpended.	Amounts re-credited to appropriations.	Total.
Customs, Light-houses, Public Buildings, &c. ....	\$17,063,805 87		\$290,861 46	\$52,112 40	\$17,415,050 73
Internal Revenue .....	4,350,075 63		14,102 99	550 00	4,364,728 63
Interior Civil .....	4,503,803 58		43,675 44	12,928 54	4,559,407 51
Treasury Proper .....	24,287,791 96		1,094,944 72	810,330 09	26,193,066 77
Diplomatic .....	1,211,490 58		12,319 70	37,697 18	1,261,707 58





## No. 2.—BALANCES and MOVEMENT of MONEYS of the GENERAL

Office	Balances June 30, 1879.			Movement
	On deposit.	Outstanding drafts.	Subject to draft.	Receipts proper.
Treasury U. S., Washington, D. C. ....	\$8, 253, 856 61	\$368, 638 47	\$7, 885, 218 14	\$117, 245, 393 26
Sub-Treasury U. S., Baltimore, Md. ....	3, 293, 034 75	20, 725 43	3, 272, 309 32	8, 748, 927 58
Sub-Treasury U. S., New York, N. Y. ....	134, 950, 077 64	1, 040, 249 15	133, 909, 828 49	162, 942, 843 84
Sub-Treasury U. S., Philadelphia, Pa. ....	13, 640, 715 46	158, 929 13	13, 481, 786 33	28, 306, 654 44
Sub-Treasury U. S., Boston, Mass. ....	5, 700, 515 38	165, 410 96	5, 535, 104 42	28, 692, 796 41
Sub-Treasury U. S., Cincinnati, Ohio. ....	2, 027, 003 33	104, 294 97	1, 922, 708 36	3, 886, 739 77
Sub-Treasury U. S., Chicago, Ill. ....	4, 449, 610 77	169, 921 12	4, 279, 689 65	7, 327, 206 05
Sub-Treasury U. S., Saint Louis, Mo. ....	3, 024, 636 88	43, 898 37	2, 980, 738 51	3, 262, 952 28
Sub-Treasury U. S., New Orleans, La. ....	2, 482, 484 95	120, 179 16	2, 362, 305 79	3, 459, 789 22
Sub-Treasury U. S., San Francisco, Cal. ....	18, 846, 269 35	75, 398 78	18, 770, 870 57	13, 127, 225 35
Depository U. S., Tucson, Ariz. ....	254, 021 84	1, 650 40	252, 371 44	83, 540 96
Depository U. S., Pittsburgh, Pa. ....	2, 126 11	.....	2, 126 11	.....
Depository U. S., Santa Fé, N. Mex. ....	249 90	.....	249 90	.....
Depository U. S., Galveston, Tex. (old acc't)	778 66	.....	778 66	.....
National Bank Depositories. ....	7, 266, 349 07	311, 665 61	6, 954, 683 46	112, 493, 171 94
National Banks, Special Designated Depositories, Funded Loan of 1907. ....	200, 004, 359 50	.....	200, 004, 359 50	.....
National Banks, Special Designated Depositories, Refunding Certificates. ....	1, 074, 797 28	.....	1, 074, 797 28	.....
First National Bank, Selma, Ala. (old acc't).	34, 787 29	.....	34, 787 29	.....
Venango National Bank, Franklin, Pa. (old account). ....	193, 932 67	.....	193, 932 67	.....
Special Designated Depositories, Refunding Certificates. ....	57, 632 14	.....	57, 632 14	.....
Mint U. S., Philadelphia, Pa., Bullion Fund.	4, 903, 362 96	.....	4, 903, 362 96	.....
Mint U. S., San Francisco, Cal., Bullion Fund. ....	4, 535, 290 36	.....	4, 535, 290 36	.....
Mint U. S., New Orleans, La., Bullion Fund.	1, 200, 737 94	.....	1, 200, 737 94	.....
Mint U. S., Carson, Nev., Bullion Fund. ....	1, 419, 540 86	.....	1, 419, 540 86	.....
Mint U. S., Denver, Colo., Bullion Fund. ....	11, 316 80	.....	11, 316 80	.....
Branch Mint U. S., Dahlonega, Ga., Bullion Fund (old account). ....	27, 950 03	.....	27, 950 03	.....
Assay Office U. S., New York; N. Y., Bullion Fund. ....	7, 281, 948 61	.....	7, 281, 948 61	.....
Assay Office U. S., Boise City, Idaho, Bullion Fund. ....	44, 656 59	.....	44, 656 59	.....
Assay Office U. S., Charlotte, N. C., Bullion Fund. ....	6, 316 34	.....	6, 316 34	.....
Assay Office U. S., Charlotte, N. C., Bullion Fund (old account). ....	32, 000 00	.....	32, 000 00	.....
Assay Office U. S., Helena, Mont., Bullion Fund. ....	150, 500 00	.....	150, 500 00	.....
Mint U. S., Philadelphia, Pa., Bullion Fund, Recoinage Account. ....	.....	.....	.....	.....
Mint U. S., San Francisco, Cal., Bullion Fund, Recoinage Account. ....	90 94	.....	90 94	.....
Mint U. S., Philadelphia, Pa., Minor Coin Redemption Account. ....	228, 409 12	.....	228, 409 12	.....
Mint U. S., Philadelphia, Pa., Minor Coin Metal Fund. ....	50, 000 00	.....	50, 000 00	.....
Less amounts "overdrawn" and "overpaid" Treasury U. S., Washington, D. C. ....	.....	.....	.....	.....
Balance of moneys in transitu. ....	425, 449, 360 13	2, 580, 961 55	422, 868, 398 58	.....
General Treasury balances and totals.	425, 449, 360 13	8, 225, 573 05	417, 223, 787 08	494, 578, 241 20

## TREASURY of the UNITED STATES for the fiscal year 1880.

During the fiscal year.				Balances June 30, 1880.		
Received by transfers from other offices.	Transferred to other offices.	Drafts paid.	Receipts refunded.	On deposit.	Outstanding drafts.	Subject to draft.
\$501,049,450 14	\$80,824,385 88	\$549,077,771 50	\$57,300 72	(Overpaid.)	(Below.)	(0
5,482,449 64	10,534,976 50	3,252,568 86	230 42	\$3,730,636 19	\$30,510 37	■
236,413,001 09	471,031,180 71	83,198,491 19	10,126 06	70,067,123 70	273,836 74	64
12,464,709 37	25,231,742 63	10,865,306 44	3,833 91	16,341,196 29	43,813 91	10
14,662,805 85	35,350,060 02	15,643,508 13	2,960 50	7,777,854 79	80,057 96	1
5,500,868 32	7,161,857 64	1,802,474 03	1,480 20	2,448,810 47	15,684 99	1
17,122,123 11	11,625,634 20	10,050,980 57	4,485 43	6,827,829 73	124,986 28	1
8,797,406 08	6,704,365 73	7,156,016 80	576 52	2,165,136 10	94,400 67	1
4,881,047 52	6,838,607 21	2,611,118 08	1,285 44	2,324,303 06	80,374 28	1
13,763,197 29	17,103,404 09	7,123,404 23	1,431 10	21,508,363 50	91,667 12	2
201,527 00		605,599 84		133,489 06	2,600 49	
				2,126 11		
				249 90		249 90
				778 66		778 66
6,473,989 78	100,044,243 90	16,104,578 00	90,654 61	7,992,316 28	231,983 38	7,771,233 90
422,885 17	200,427,244 67					
877 86	1,075,675 08					
				34,787 29		34,787 29
				103,932 67		103,932 67
11,431 73	60,063 87					
43,548,422 17	81,290,836 41			17,161,948 72		17,161,948 72
9,018,942 95	2,689,535 00			9,865,698 31		9,865,698 31
8,275,320 57	5,426,471 73			4,049,586 78		4,049,586 78
452,000 00	4,738 00			1,802,802 86		1,802,802 86
440,507 48	330,855 06			120,908 33		120,908 33
				27,950 03		27,950 03
69,000,000 00	30,228,804 46			37,053,144 15		37,053,144 15
177,323 67	117,693 07			104,288 19		104,288 19
98,000 00	83,324 14			26,992 20		26,992 20
				32,000 00		32,000 00
541,805 22	487,602 41			204,402 81		204,402 81
47,768 06	47,280 47			490 49		490 49
	90 94					
585,999 10	625,500 00			188,908 22		188,908 22
				50,000 00		50,000 00
				212,098,124 68		211,028,493 49
				9,410,855 49	274,654 87	9,685,409 80
				202,087,200 19	1,344,185 56	201,343,063 63
					3,340,752 71	3,340,752 71
1,044,382,149 74	1,053,357,082 22	708,100,900 76	175,406 90	202,687,200 19	1,996,567 15	204,683,836 34

No. 3.—COMPARATIVE STATEMENT of RECEIPTS, as shown by WARRANTS, for the fiscal years 1879 and 1880.

Fiscal year.	Customs.	Internal revenue.	Lands.	Miscellaneous sources.	Total net revenues.
1879 .....	\$137, 250, 047 70	\$113, 561, 610 58	\$924, 781 06	\$22, 090, 745 12	\$273, 827, 184 46
1880 .....	186, 522, 064 60	124, 009, 873 92	1, 016, 506 00	21, 978, 665 88	333, 526, 610 98
Decrease in 1880 .....	.....	.....	.....	112, 079 26	.....
Increase in 1880 .....	49, 272, 016 90	10, 447, 763 34	91, 725 54	.....	59, 699, 426 53

No. 4.—COMPARATIVE STATEMENT of EXPENDITURES, as shown by WARRANTS, for the fiscal years 1879 and 1880.

Fiscal year.	Interest and premium on public debt.	Civil and miscellaneous.	War Department.	Navy Department.	Interior Department.	Total net expenditures.
1879 .....	\$105, 827, 949 00	\$65, 741, 555 49	\$40, 425, 660 73	\$15, 125, 126 84	\$40, 327, 501 47	\$268, 947, 843 53
1880 .....	98, 552, 895 53	54, 713, 529 76	38, 116, 916 23	13, 536, 984 74	62, 722, 631 53	267, 642, 957 78
Decr. 1880 .....	6, 775, 053 47	11, 028, 025 73	2, 308, 744 51	1, 588, 142 10	.....	.....
Incr. 1880 .....	.....	.....	.....	.....	22, 395, 040 00	696, 074 25

No. 5.—COMPARATIVE STATEMENT of BALANCES in the TREASURY at the close of the fiscal years 1879 and 1880.

Balance June 30, 1879, as shown by Warrant Ledger .....				.....	\$358, 663, 846 60
Net Revenues 1880 .....				\$333, 526, 610 98	
Net Expenditures 1880 .....				267, 642, 957 78	
Increase of funds .....				.....	68, 843, 651 30
					424, 567, 499 20
Public debt.	Issues during fiscal year.	Redemptions during fiscal year.	Excess of issues over redemptions.	Excess of redemptions over issues.	
Bonds and Securities .....		\$268, 087, 370 00	.....	\$268, 087, 370 00	
Funded Loan of 1907 .....	\$72, 450, 900 00	.....	\$72, 450, 900 00	.....	
Gold Certificates .....	.....	7, 409, 100 00	.....	7, 409, 100 00	
Silver Certificates .....	10, 091, 070 00	183, 680 00	9, 907, 320 00	.....	
Certificates of Deposit .....	47, 355, 000 00	63, 260, 000 00	.....	15, 905, 000 00	
Refund'g Certificates .....	614, 640 00	12, 095, 850 00	.....	11, 481, 210 00	
United States Notes .....	81, 302, 563 00	81, 302, 563 00	.....	.....	
Fractional Currency .....	.....	251, 717 41	.....	251, 717 41	
Total .....	211, 814, 103 00	432, 590, 280 41	82, 358, 220 00	303, 134, 397 41	
Net excess of Redemptions over Issues .....					220, 776, 177 41
Balance June 30, 1880, as shown by Warrant Ledger .....					203, 791 27 99

**No. 6.—EXPLANATORY STATEMENT of DIFFERENCES between the BALANCES of June 30, 1880, as shown by the Treasurer's books and by the Public Debt Statement.**

The General Treasury balance subject to draft June 30, 1880, as shown by Statement No. 2, was .....	\$204, 683, 836 34	
The cash in the Treasury June 30, 1880, as shown by the Public Debt Statement of July 1, 1880, was.....	201, 088, 622 88	
		<hr/>
The difference, amounting to .....		\$3, 595, 213 46
is explained in part by the fact that transcripts of the general account, containing reports of receipts into the Treasury prior to July 1, 1880, were not received by the Treasurer until after that date from the following offices, viz :		
Sub-Treasury U. S., Boston, Mass.....	219, 748 51	
Sub-Treasury U. S., Cincinnati, Ohio.....	63, 408 70	
Sub-Treasury U. S., Chicago, Ill.....	90, 168 53	
Sub-Treasury U. S., Saint Louis, Mo.....	11, 512 39	
Sub-Treasury U. S., New Orleans, La.....	23, 115 84	
Sub-Treasury U. S., San Francisco, Cal.....	276, 574 92	
Depository U. S., Tucson, Ariz.....	6, 415 65	
National Bank Depositaries .....	1, 809, 500 05	
The remainder of the difference consists of the following items, viz:		
Certificates of deposit (act of June 8, 1872) in the Treasurer's balance but not in that of the Public Debt Statement.....	180, 000 00	
Unavailable cash included in the Treasurer's balance but not in that of the Public Debt Statement .....	964, 773 87	
		<hr/>
		3, 595, 213 46

**No. 7.—BALANCES standing to the credit of DISBURSING OFFICERS and AGENTS of the UNITED STATES June 30, 1880.**

Office in which deposited.	Amount.
Treasury U. S., Washington, D. C.....	\$1, 644, 169 27
Sub-Treasury U. S., New York, N. Y.....	18, 828, 545 37
Sub-Treasury U. S., Baltimore, Md.....	210, 758 24
Sub-Treasury U. S., Philadelphia, Pa.....	693, 411 78
Sub-Treasury U. S., Boston, Mass.....	757, 107 30
Sub-Treasury U. S., Cincinnati, Ohio.....	129, 128 29
Sub-Treasury U. S., Chicago, Ill.....	1, 104, 670 50
Sub-Treasury U. S., Saint Louis, Mo.....	865, 527 78
Sub-Treasury U. S., New Orleans, La.....	307, 674 93
Sub-Treasury U. S., San Francisco, Cal.....	726, 635 19
Depository U. S., Tucson, Ariz.....	91, 165 95
National Bank Depositaries .....	3, 222, 496 33
	<hr/>
	28, 581, 290 93

**No. 8.—SUMMARY of the TREASURER'S QUARTERLY ACCOUNTS for the service of the POST-OFFICE DEPARTMENT for the fiscal year 1880.**

Expenditures by the Treasurer on Warrants.....	\$9, 813, 888 03
Expenditures by Postmasters.....	20, 048, 562 16
	<hr/>
Total expenditures .....	35, 862, 450 19
Balance due the United States June 30, 1880.....	2, 540, 591 43
	<hr/>
Total .....	38, 403, 041 62
Receipts covered into the Treasury by Warrants .....	9, 641, 583 04
Receipts by Postmasters.....	26, 048, 562 16
	<hr/>
Total net receipts.....	35, 690, 145 20
Balance due the United States June 30, 1879.....	2, 712, 896 42
	<hr/>
Total .....	38, 403, 041 62



# No. 9.—SUMMARY of the TREASURER'S QUARTERLY ACCOUNTS for the fiscal year 1880, as RENDERED to the FIRST AUDITOR of the TREASURY.

Dr.

The United States in account with James Gillham, Treasurer of the United States, for the fiscal year 1880.

Cr.

## To balance on current Quar- terly Warrants on account of—

Salary	\$26,872,442 76
Office Salaries	548,800 06
Printing	2,000 41 16
Postage	1,279 18 15
Stationery	17,375 30 70
Interest on Civil	4,541 277 60
Interest on Debt	4,127 110 31
Interest on Revenue	531,863 450 04
Interest on	61,517 967 93
War	89 472 470 05
Navy	2 070,502 29
	<b>\$712,041,418 94</b>

## To payments on previous Quar- terly Warrants on account of—

Treasury	62,414 03
Office Salaries	9 614 56
Printing	28 704 21
Postage	3 376 41
Stationery	60 474 63
Interest on Civil	26 624 14
Interest on Debt	61 374 92
Interest on Revenue	14 164 62
War	116 437 64
Navy	3 119 24
	<b>361,424 04</b>

Balance

## General Treasury (see State List No. 2)

Less amount not covered by warrants	204,603,106 81
	<b>\$46,820,843 02</b>

## Balance of Warrant Ledger (see Statement Nos. 1 and 2) Amount on deposit with the States. Amount of unpaid Warrants

## To balance of covered money June 30 1880

## Total

## Balance of July 1, 1879.

## General Treasury

Less amount not covered by Warrants	\$417,223,707 06
	<b>50,530,910 90</b>

## Balance of Warrant Ledger Amount on deposit with the States

Amount of unpaid Warrants	\$15,681,846 00
	<b>28 107 644 31</b>
	<b>1 39 179 10</b>

4987,121,651 65

## By 1 By 1 count of—

## Miscellaneous Revenue and Revenue Counter Warrants

Coinage	212,702,702 86
Land	126,522,964 00
Internal Revenue	1,016,500 60
Miscellaneous Revenue and Counter Warrants	124,000,473 92
Interior Reimbursements and Counter	3,793,254 87
Com-	1,818,831 47
	<b>1,541,774 41</b>
	<b>6,540 903 01</b>
	<b>\$5,037,900 87</b>

## By amount of War Warrant No 1064, of first quarter, 1879, in fa- vor of Fountain Pullen, charged again to the Treasurer on ac- count of defective voucher

164 00

830,038,103 47

## Total

866,162,750 00

## No. 10.—BALANCES and MOVEMENT OF MONIES of the POST-OFFICE DEPARTMENT for the fiscal year 1880.

Office.	Balances June 30, 1879.		Movement during the fiscal year.						Balances June 30, 1880.		
	On deposits.	Outstand- ing drafts.	Subject to draft.	Received by transfers from other offices.	Receipts proper.	Expendi- tures.	Transferred to other offices.	Receipts refunded.	On deposits.	Outstand- ing drafts.	Subject to draft.
Treasury U. S., Washington, D. C.	908,841 25	31,136 77	998,204 48	6436,403 25	979,505 03	4310,474 30	.....	91,254 29	\$114,560 93	\$16,833 40	487 707 53
Sub-Treasury U. S., Baltimore, Md.	70,620 54	516 53	72,367 90	.....	216,214 60	103,373 60	.....	.....	131,725 64	1,100 20	130,625 15
Sub-Treasury U. S., Boston, Mass.	191,065 66	62 97	181,322 69	.....	708,127 77	317,032 42	.....	.....	202,471 00	142 20	202,328 80
Sub-Treasury U. S., Chicago, Ill.	81,340 25	838 36	82,801 69	406,006 66	577,512 40	733,006 44	.....	.....	305,846 21	23,835 45	282,010 76
Sub-Treasury U. S., Cincinnati, Ohio.	83,035 50	3,068 45	79,067 05	56,000 80	230,847 62	275,287 96	.....	110 31	97,284 83	3,811 90	93,472 84
Sub-Treasury U. S., New Orleans, La.	65,897 70	3,254 63	62,843 11	606,000 80	117,801 11	636,077 32	.....	.....	147,421 55	12,555 39	134,866 16
Sub-Treasury U. S., New York, N. Y.	1,640,866 89	19,151 79	1,621,703 16	.....	6,904,407 93	4,518,582 94	2,950,000 00	.....	930,792 88	85,702 80	831,090 08
Sub-Treasury U. S., Philadelphia, Pa.	124,531 76	65 44	124,516 31	.....	667,727 19	590,581 46	.....	24 29	201,693 15	2,503 09	199,190 40
Sub-Treasury U. S., San Francisco, Cal.	205,126 33	18,908 45	186,217 87	.....	586,211 47	440,144 53	200,000 00	.....	151,193 24	11,884 26	139,308 98
Sub-Treasury U. S., Saint Louis, Mo.	92,533 94	5,659 70	88,875 24	1,200,000 00	344,075 47	1,450,836 07	.....	.....	176,773 84	6,774 82	169,998 72
	31,164 44	.....	31,164 44	.....	.....	.....	.....	.....	31,164 44	.....	31,164 44
	5,823 50	.....	5,823 50	.....	.....	.....	.....	.....	5,823 50	.....	5,823 50
	83 36	.....	83 36	.....	.....	.....	.....	.....	83 36	.....	83 36
	205 76	.....	205 76	.....	.....	.....	.....	.....	205 76	.....	205 76
	18,202 50	.....	18,202 50	.....	147,227 55	.....	131,408 25	276 10	34,759 70	.....	34,759 70
	2,801 00	.....	2,801 00	.....	.....	.....	.....	.....	2,801 00	.....	2,801 00
Total .....	2,712,896 43	52,464 13	2,660,412 29	2,706,403 25	9,643,248 13	9,813,868 66	2,706,403 25	1,045 09	2,546,591 43	164,964 39	2,381,627 04
Add revenues collected and expended by Postmasters as shown by Warrants of the Postmaster-General—											
For the Quarter ended 1 <sup>st</sup> .....	.....	.....	.....	.....	4,271,694 30	6,221,044 30	.....	.....	.....	.....	.....
For the Quarter ended 1 <sup>st</sup> .....	.....	.....	.....	.....	6,513,589 45	6,513,589 45	.....	.....	.....	.....	.....
For the Quarter ended 1 <sup>st</sup> .....	.....	.....	.....	.....	6,911,658 26	6,911,658 26	.....	.....	.....	.....	.....
For the Quarter ended 1 <sup>st</sup> .....	.....	.....	.....	.....	6,402,200 06	6,402,200 06	.....	.....	.....	.....	.....
Aggregate Receipts and Expenditures .....	.....	.....	.....	.....	35,091,610 29	35,062,450 19	.....	.....	.....	.....	.....

**No. 11.—UNAVAILABLE FUNDS of the GENERAL TREASURY and of the  
POST-OFFICE DEPARTMENT, June 30, 1880.**

The following items were unavailable on June 30, 1880, viz:

On deposit with the following States under the act of June 23, 1836:—

Maine .....	\$955, 838 25
Vermont.....	669, 086 79
New Hampshire .....	669, 086 79
Massachusetts .....	1, 338, 173 58
Connecticut.....	764, 670 60
Rhode Island .....	382, 335 30
New York .....	4, 014, 520 71
Pennsylvania .....	2, 867, 514 78
New Jersey.....	764, 670 60
Ohio .....	2, 007, 260 34
Indiana .....	860, 254 44
Illinois .....	477, 919 14
Michigan .....	286, 751 49
Delaware .....	286, 751 49
Maryland .....	955, 838 25
Virginia .....	2, 198, 427 99
North Carolina .....	1, 433, 757 39
South Carolina .....	1, 051, 422 09
Georgia.....	1, 051, 422 09
Alabama.....	669, 086 79
Louisiana.....	477, 919 14
Mississippi.....	382, 335 30
Tennessee.....	1, 433, 757 39
Kentucky.....	1, 433, 757 39
Missouri.....	382, 335 30
Arkansas .....	286, 751 49
<b>Total on deposit with the States.....</b>	<b>\$28, 101, 644 91</b>

Deficits and Defaults, Branch Mint, U. S., San Francisco, Cal., 1857 to 1869.....	419, 243 84
Default, Branch Mint U. S., Dahlonega, Ga., 1861, at the outbreak of the Rebellion .....	27, 950 03
Branch Mint U. S., Charlotte, N. C., 1861, at the outbreak of the Rebellion .....	32, 000 00
Depository U. S., Galveston, Tex., 1861, at the outbreak of the Rebellion .....	778 66
Depository U. S., Baltimore, Md., 1866 .....	547 50
Deficit, Depository, U. S., Santa Fé, N. Mex., 1866, short in Remittance....	249 90
Failure, Venango National Bank of Franklin, Pa., 1866.....	193, 932 67
First National Bank of Selma, Ala., 1867 .....	34, 787 29
Default, Sub-Treasury U. S., New Orleans, La., 1867, May and Whitaker .	675, 325 22
Sub-Treasury U. S., New Orleans, La., 1867, May property .	5, 566 31
Deficit, Sub-Treasury U. S., New York, 1867, counterfeit 7.30s.....	8, 750 31
Default, Depository U. S., Pittsburgh, Pa., 1867 .....	2, 126 11
Depository U. S., Baltimore, Md., 1867.....	6, 900 77
Depository U. S., Baltimore, Md., 1870 .....	1, 196 87
Deficit, Treasury U. S., Washington, D. C., 1875.....	650 61
Treasury U. S., Washington, D. C., 1876 .....	555 85
<b>Total .....</b>	<b>1, 410, 561 94</b>
<b>Total .....</b>	<b>29, 512, 206 85</b>

The Post-Office Department Balance "subject to draft" is \$2,375.727.04, of which the following items were unavailable on June 30, 1880, viz:

Default, Sub-Treasury U. S., New Orleans, La., 1861, at the outbreak of the Rebellion .....	\$31, 164 44
Depository U. S., Savannah, Ga., 1861, at the outbreak of the Rebellion .....	205 76
Depository U. S., Galveston, Tex., 1861, at the outbreak of the Rebellion .....	83 36
Depository U. S., Little Rock, Ark., 1861, at the outbreak of the Rebellion .....	5, 823 50
Failure, Merchants' National Bank of Washington, D. C., 1866 .....	2, 801 00
<b>Total .....</b>	<b>\$40, 078 06</b>

**RECAPITULATION.**

General Treasury Moneys unavailable June 30, 1880.....	\$29, 512, 206 85
Post-Office Department Moneys unavailable June 30, 1880 .....	40, 078 06
<b>Total unavailable.....</b>	<b>29, 552, 284 91</b>

**No. 12.—NUMBER of NATIONAL BANKS ORGANIZED, FAILED, and in VOLUNTARY LIQUIDATION to June 30, 1880.**

The number of National Banks which had deposited securities for their circulation to June 30, 1879, was.....	2,427
Organized during the fiscal year 1880.....	58
Total number of National Banks organized to June 30, 1880.....	2,485
Failed prior to July 1, 1879.....	81
Failed during the fiscal year 1880.....	5
Total number of failed National Banks June 30, 1880.....	86
In voluntary liquidation prior to July 1, 1879.....	276
Went into voluntary liquidation during the fiscal year 1880.....	21
Total number of National Banks in voluntary liquidation June 30, 1880.....	297
Number of National Banks doing business June 30, 1880.....	2,102
Total.....	2,485

**No. 13.—NATIONAL BANKS which FAILED during the fiscal year 1880.**

Place.	State.	Title.
Brattleboro' .....	Vermont.....	First National Bank.
Batler .....	Pennsylvania.....	First National Bank.
Meadville.....	Pennsylvania.....	First National Bank.
Monticello.....	Indiana.....	First National Bank.
Newark .....	New Jersey.....	First National Bank.

**No. 14.—NATIONAL BANKS which went into VOLUNTARY LIQUIDATION during the fiscal year 1880.**

Place.	State.	Title.
Afton.....	Iowa.....	First National Bank.
Auburn.....	New York.....	Auburn City National Bank.
Aurora .....	Illinois .....	Union National Bank.
Batavia.....	Illinois .....	First National Bank.
Bedford.....	Indiana.....	Bedford National Bank.
Centerville .....	Iowa.....	Farmers' National Bank.
Clyde.....	New York.....	First National Bank.
Deer Lodge.....	Montana Territory.....	First National Bank.
Delavan .....	Wisconsin .....	The National Bank.
Franklin.....	Kentucky .....	First National Bank.
Gainesville .....	Alabama.....	Gainesville National Bank.
Hackensack .....	New Jersey.....	First National Bank.
Kathsburg .....	Illinois .....	Farmers' National Bank.
Manchester.....	Ohio .....	Manchester National Bank.
Memphis .....	Tennessee .....	Fourth National Bank.
Meyersdale .....	Pennsylvania .....	First National Bank.
Millinburg .....	Pennsylvania .....	First National Bank.
Nashville .....	Tennessee .....	Mechanics' National Bank.
Salem.....	Indiana.....	The National Bank.
San Francisco .....	California.....	The National Gold Bank and Trust Co.
Winona.....	Minnesota.....	Mechanics' National Bank.

**No. 15.—SEMI-ANNUAL DUTY** assessed upon and collected from **NATIONAL BANKS** by the **TREASURER OF THE UNITED STATES** for the fiscal years from 1864 to 1880, inclusive.

Fiscal year.	On circulation.	On deposits.	On capital.	Total.
1864.....	\$53, 193 32	\$95, 911 87	\$18, 422 07	\$167, 527 26
1865.....	733, 247 59	1, 067, 530 66	133, 251 15	1, 933, 029 40
1866.....	2, 100, 785 30	2, 633, 102 77	406, 947 74	5, 140, 835 81
1867.....	2, 868, 630 78	2, 050, 160 00	321, 881 86	5, 240, 672 64
1868.....	2, 946, 343 07	2, 564, 143 44	306, 781 67	5, 817, 268 18
1869.....	2, 957, 410 73	2, 614, 553 58	312, 918 68	5, 884, 882 99
1870.....	2, 949, 744 13	2, 614, 767 61	375, 962 26	5, 940, 474 00
1871.....	2, 987, 021 69	2, 802, 840 85	385, 292 12	6, 175, 154 67
1872.....	3, 193, 570 03	3, 120, 984 37	389, 356 37	6, 703, 910 77
1873.....	3, 353, 180 13	3, 196, 569 29	454, 891 51	7, 004, 640 93
1874.....	3, 404, 483 11	3, 209, 967 72	409, 048 02	7, 023, 498 85
1875.....	3, 283, 450 89	3, 514, 265 39	507, 417 76	7, 305, 134 04
1876.....	3, 091, 795 76	3, 507, 129 64	632, 296 16	7, 231, 221 56
1877.....	2, 900, 957 53	3, 451, 965 38	660, 784 90	7, 013, 707 81
1878.....	2, 948, 047 08	3, 273, 111 74	560, 296 88	6, 781, 455 70
1879.....	3, 009, 647 16	3, 309, 668 90	401, 920 61	6, 721, 236 67
1880.....	3, 153, 035 03	4, 058, 710 61	379, 424 19	7, 591, 169 83
Total .....	45, 941, 161 83	47, 703, 404 11	6, 716, 903 81	100, 361, 469 75

**No. 16.—BONDS and STOCKS** of the **INDIAN TRUST FUND** in **CUSTODY** of the **TREASURER OF THE UNITED STATES** June 30, 1880, under the act of June 10, 1876.

Class of Bonds.	Registered.	Coupon.	Total.
<i>State, Railway, and Canal Bonds.</i>			
Arkansas: Funded Debt .....		\$168, 000 00	\$168, 000 00
Florida: State Stocks .....		132, 000 00	132, 000 00
Indiana: Wabash and Erie Canal Bonds .....		6, 000 00	6, 000 00
Louisiana: State Stocks .....		37, 000 00	37, 000 00
Maryland: State Stocks .....	\$8, 350 17		8, 350 17
North Carolina: State Stocks .....		192, 000 00	192, 000 00
South Carolina: State Stocks .....		125, 000 00	125, 000 00
Tennessee: State Stocks .....	191, 000 00	144, 000 00	335, 000 00
Tennessee: Nashville and Chattanooga Railroad Bonds .....		512, 000 00	512, 000 00
Virginia: State Stocks .....		341, 000 00	341, 000 00
Virginia: Chesapeake and Ohio Canal Bonds .....		13, 000 00	13, 000 00
<i>United States Bonds.</i>			
Loan of July and August, 1861 .....	500 00		500 00
Pacific Railway Bonds, sixes .....	280, 000 00		280, 000 00
Funded Loan of 1881, 5 per cent. ....	2, 188, 900 00		2, 188, 900 00
Total.....	2, 669, 410 00	1, 910, 000 00	4, 579, 410 00



**No. 17.—STATEMENT by LOANS of UNITED STATES BONDS held in TRUST for NATIONAL BANKS June 30, 1880, and of CHANGES during the FISCAL YEAR 1880 in CHARACTER of BONDS HELD.**

Title of Loan.	Bonds held in trust June 30, 1879.			Deposits and Withdrawals during fiscal year.				Bonds held in trust June 30, 1880.		
	For circula- tion.	For public deposits.	Total.	For circulation.		For public deposits.		For circula- tion.	For public deposits.	Total.
				Deposited.	Withdrawn.	Deposited.	Withdrawn.			
6 PER CENT. COIN.										
Loan of February, 1861 .....	\$2,176,000	\$68,000	\$2,244,000	\$382,000	\$466,000	\$20,000		\$2,002,000	\$38,000	\$2,130,000
Loan of July and August, 1861.....	31,739,100	880,800	32,619,900	5,923,850	8,413,900	15,000	\$110,000	34,249,050	973,800	35,224,850
Loan of 1863 (81s).....	17,077,100	696,500	17,773,600	2,330,550	2,078,550	4,000	35,000	17,329,100	727,500	18,056,600
Oregon War Debt .....		38,700	38,700						38,700	38,700
Consols of 1867 .....	143,100	3,500	146,600		142,100	3,500		8,000		3,000
Consols of 1868 .....	381,500	26,500	408,000		366,500	26,500		15,000		15,000
5 PER CENT. COIN.										
Ten-Forties of 1864 .....	27,604,350	1,049,500	28,653,850		25,224,450	1,049,500		1,379,900		1,379,900
Funded Loan of 1881.....	117,011,950	3,452,400	120,464,350	28,303,450	6,836,650	196,000	994,500	138,378,750	4,250,900	142,629,650
4½ PER CENT. COIN.										
Funded Loan of 1891 .....	83,058,850	1,230,000	84,288,850	5,909,400	3,205,000	385,000	100,000	37,760,950	945,000	38,705,950
4 PER CENT. COIN.										
Funded Loan of 1907.....	118,538,950	6,962,500	125,501,450	32,511,300	24,973,950	740,400	1,546,000	126,076,300	7,768,100	133,844,400
6 PER CENT. CURRENCY.										
Pacific Railway Bonds .....	4,524,000	12,000	4,537,000	353,000	500,000		20,000	4,368,000	33,000	4,401,000
Personal Bonds .....		330,000	330,000						330,000	330,000
Total .....	354,254,600	14,751,400	369,006,000	75,713,550	68,816,100	2,449,900	2,805,500	361,652,650	15,107,000	376,759,650

**No. 15.—SEMI-ANNUAL DUTY assessed upon and collected from NATIONAL BANKS by the TREASURER OF THE UNITED STATES for the fiscal years from 1864 to 1880, inclusive.**

Fiscal year.	On circulation.	On deposits.	On capital.	Total.
1864.....	\$53,193 32	\$95,911 87	\$18,432 97	\$167,537 96
1865.....	733,247 59	1,087,530 86	133,251 15	1,953,029 60
1866.....	2,106,785 30	2,633,102 77	406,947 74	5,146,835 81
1867.....	2,868,636 78	2,050,180 99	221,881 86	5,140,698 63
1868.....	2,946,343 07	2,564,143 44	300,781 67	5,811,268 18
1869.....	2,957,416 73	2,614,553 53	312,918 68	5,884,888 94
1870.....	2,949,744 13	2,614,767 61	375,962 26	5,940,474 00
1871.....	2,987,021 69	2,802,840 85	885,292 12	6,675,154 67
1872.....	3,193,570 03	3,120,984 37	389,366 27	6,703,920 67
1873.....	3,353,166 13	3,196,569 20	454,891 51	7,004,626 84
1874.....	3,404,483 11	3,209,967 72	469,048 02	7,083,498 85
1875.....	3,283,450 89	3,514,265 39	507,417 78	7,305,134 06
1876.....	3,091,795 76	3,505,129 64	632,296 16	7,229,221 56
1877.....	2,900,957 53	3,451,965 38	660,784 90	7,013,707 81
1878.....	2,918,047 08	3,273,111 74	560,296 88	6,751,455 69
1879.....	3,009,647 16	3,509,668 90	401,920 61	6,921,236 67
1880.....	3,153,635 63	4,058,710 61	379,424 19	7,591,770 43
Total .....	45,941,161 83	47,703,404 11	6,716,903 81	100,361,469 75

**No. 16.—BONDS and STOCKS of the INDIAN TRUST FUND in CUSTODY of the TREASURER OF THE UNITED STATES June 30, 1880, under the act of June 16, 1876.**

Class of Bonds.	Registered.	Coupon.	Total.
<i>State, Railway, and Canal Bonds.</i>			
Arkansas: Funded Debt.....		\$168,000 00	\$168,000 00
Florida: State Stocks.....		132,000 00	132,000 00
Indiana: Wabash and Erie Canal Bonds.....		6,000 00	6,000 00
Louisiana: State Stocks.....		37,000 00	37,000 00
Maryland: State Stocks.....	\$8,350 17		8,350 17
North Carolina: State Stocks.....		192,000 00	192,000 00
South Carolina: State Stocks.....		125,000 00	125,000 00
Tennessee: State Stocks.....	191,000 00	144,000 00	335,000 00
Tennessee: Nashville and Chattanooga Railroad Bonds.....		512,000 00	512,000 00
Virginia: State Stocks.....		501,000 00	501,000 00
Virginia: Chesapeake and Ohio Canal Bonds.....		12,000 00	12,000 00
<i>United States Bonds.</i>			
Loan of July and August, 1861.....	500 00		500 00
Pacific Railway Bonds, sixes.....	280,000 00		280,000 00
Funded Loan of 1881, 5 per cent.....	2,188,900 00		2,188,900 00
Total.....	2,669,410 83	1,910,000 00	4,579,410 83

**No. 17.**—STATEMENT by LOANS of UNITED STATES BONDS held in TRUST for NATIONAL BANKS June 30, 1880, and of CHANGES during the FISCAL YEAR 1880 in CHARACTER of BONDS HELD.

REPORT OF THE SECRETARY OF THE TREASURY.

283

Title of Loan.	Bonds held in trust June 30, 1879.			Deposits and Withdrawals during fiscal year.				Bonds held in trust June 30, 1880.		
	For circula- tion.	For public deposits.	Total.	For circulation.		For public deposits.		For circula- tion.	For public deposits.	Total.
				Deposited.	Withdrawn.	Deposited.	Withdrawn.			
6 PER CENT. COIN.										
Loan of February, 1861 .....	\$2,176,000	\$68,000	\$2,244,000	\$382,000	\$406,000	.....	\$30,000	\$2,092,000	\$38,000	\$2,130,000
Loan of July and August, 1861.....	31,739,100	880,800	32,619,900	5,923,850	3,413,900	\$110,000	15,000	34,249,050	975,800	35,224,850
Loan of 1863 (81a).....	17,077,100	636,500	17,773,600	2,330,550	2,078,550	35,000	4,000	17,329,100	727,500	18,056,600
Oregon War Debt .....	.....	38,700	38,700	.....	.....	.....	.....	.....	38,700	38,700
Consols of 1867 .....	145,100	3,500	148,600	.....	142,100	.....	8,500	3,000	.....	3,000
Consols of 1868 .....	381,500	26,500	408,000	.....	366,500	.....	26,500	15,000	.....	15,000
5 PER CENT. COIN.										
Ten-Forties of 1864 .....	27,604,350	1,049,500	28,653,850	.....	25,224,450	.....	1,040,500	1,379,900	.....	1,379,900
Funded Loan of 1881.....	117,011,950	3,452,490	120,464,350	28,303,450	6,936,650	994,500	196,000	138,378,750	4,250,900	142,629,650
4½ PER CENT. COIN.										
Funded Loan of 1891.....	35,056,850	1,230,000	36,286,850	5,909,400	3,205,000	100,000	385,000	37,760,950	945,000	38,705,950
4 PER CENT. COIN.										
Funded Loan of 1907.....	118,538,950	6,962,500	125,501,450	32,511,300	24,973,950	1,546,000	740,400	126,076,300	7,768,100	133,844,400
6 PER CENT. CURRENCY.										
Pacific Railway Bonds .....	4,524,000	13,000	4,537,000	353,000	500,000	20,000	.....	4,268,000	33,000	4,401,000
Personal Bonds .....	.....	330,000	330,000	.....	.....	.....	.....	.....	330,000	330,000
Total .....	354,254,600	14,751,400	369,006,000	75,713,550	68,816,100	2,805,500	2,449,900	381,652,650	15,107,000	376,759,650

No. 18.—UNITED STATES CURRENCY, of each issue, OUTSTANDING at the close of EACH FISCAL YEAR from 1862 to 1880, inclusive.

Issue.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.
Old Demand Notes.....	\$51,105,235 00	\$3,364,000 00	\$789,037 50	\$472,003 50	\$272,102 75	\$208,432 50	\$143,912 00	\$123,739 25	\$106,256 00	\$96,505 50
United States Notes.....	96,620,000 00	387,646,589 00	447,300,203 10	431,066,427 99	400,760,805 85	371,783,697 00	356,000,000 00	356,000,000 00	356,000,000 00	356,000,000 00
One and two year Notes of 1863.....	.....	.....	172,620,550 00	50,625,170 00	8,439,540 50	1,825,889 50	716,212 00	347,772 00	253,952 00	205,992 00
Compound Interest Notes.....	.....	.....	6,060,000 00	191,721,470 00	172,869,941 00	134,774,981 00	54,608,230 00	3,063,410 00	2,191,070 00	814,280 00
Fractional Currency.....	.....	.....	23,324,283 10	25,033,128 76	27,008,875 36	28,474,623 02	32,727,908 47	32,114,637 36	39,878,684 48	40,582,874 56
Total .....	147,725,235 00	411,223,045 00	649,094,073 70	698,918,600 25	608,870,823 46	536,567,523 02	444,196,262 47	391,649,558 61	398,430,562 48	397,699,652 06

Issue.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Old Demand Notes.....	\$88,296 25	\$79,967 50	\$76,739 50	\$70,107 50	\$66,917 50	\$63,962 50	\$62,297 50	\$61,470 00	\$60,975 00
United States Notes.....	357,500,000 00	356,000,000 00	381,999,073 00	375,771,580 00	369,772,284 00	359,764,332 00	346,681,016 00	346,681,016 00	346,681,016 00
One and two year Notes of 1863.....	178,222 00	148,155 00	130,805 00	114,175 00	105,405 00	96,285 00	90,475 00	86,845 00	82,815 00
Compound Interest Notes.....	623,010 00	499,780 00	429,080 00	371,470 00	331,260 00	300,260 00	274,780 00	260,650 00	243,310 00
Fractional Currency.....	40,855,815 27	44,799,365 44	45,912,003 34	42,129,424 19	34,446,595 39	20,403,137 34	16,547,768 77	15,842,610 11	15,590,892 70
Total.....	599,245,363 52	601,527,267 94	628,647,693 84	618,456,766 69	604,722,461 89	580,627,976 84	563,658,337 27	562,932,591 11	562,659,008 70

No. 19.—REDEMPTIONS for the FISCAL YEAR 1880, and TOTAL REDEMPTIONS to June 30, 1880, of UNITED STATES CURRENCY and of NOTES of FAILED, LIQUIDATING, and REDUCING NATIONAL BANKS.

Issue.	Redemptions (net value).			Deductions on account of mutilations.			Total face value of notes re-deemed.
	In fiscal year.		To June 30, 1880.	In fiscal year.		To June 30, 1880.	
	To June 30, 1879.	To June 30, 1880.		To June 30, 1879.	To June 30, 1880.		
Old Demand Notes .....	\$59,968,401 25	\$495 00	\$59,968,896 25	\$2,131 25	.....	\$2,131 25	\$59,969,027 50
United States Notes .....	1,151,470,501 50	81,802,563 00	1,232,773,064 50	141,672 50	\$10,157 00	151,829 50	1,232,924,894 00
One and two year Notes of 1863 .....	210,912,763 00	4,030 00	210,916,793 00	392 00	.....	392 00	210,917,185 00
Compound Interest Notes .....	266,834,810 00	17,240 00	266,851,650 00	480 00	.....	480 00	266,852,130 00
Fractional Currency .....	352,758,512 50	251,717 41	353,008,229 91	140,714 03	430 73	141,144 76	353,149,374 67
Silver Certificates .....	8,460,050 00	183,680 00	8,643,730 00	.....	.....	.....	8,643,730 00
Notes of failed, liquidating, and reducing National Banks ..	91,008,818 75	6,401,816 00	97,410,734 75	1,306 25	80 00	1,386 25	97,412,121 00
Total .....	2,140,909,357 00	88,161,741 41	2,229,071,098 41	266,606 03	10,667 73	277,273 76	2,229,368,462 17

**No. 20.—UNITED STATES CURRENCY of each ISSUE and DENOMINATION ISSUED, REDEEMED, and OUTSTANDING at the CLOSE of the FISCAL YEARS 1879 and 1880.**

**OLD DEMAND NOTES.**

[Issue began August 26, 1861, and ceased March 5, 1862.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
5s .....	\$21,800,000 00	\$21,775,725 00	\$24,273 00	\$21,775,880 00	\$24,120 00
10s .....	20,030,000 00	20,007,425 00	22,575 00	20,007,665 00	22,335 60
20s .....	18,200,000 00	18,185,380 00	14,620 00	18,185,480 00	14,520 00
<b>Total.....</b>	<b>60,030,000 00</b>	<b>59,968,530 00</b>	<b>61,470 00</b>	<b>59,969,025 00</b>	<b>60,975 00</b>

**UNITED STATES NOTES, NEW ISSUE.**

[Issue began April 2, 1862, and ceased April 19, 1869.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
1s .....	\$28,351,348 00	\$27,492,607 85	\$858,650 15	\$27,510,430 45	\$840,917 55
2s .....	34,071,128 00	33,360,161 40	710,966 60	33,386,228 80	684,899 20
5s .....	101,000,000 00	99,106,196 75	1,893,803 25	99,874,070 75	1,625,929 25
10s .....	118,010,000 00	112,053,503 00	5,956,497 00	112,468,929 00	5,541,071 00
20s .....	102,920,000 00	98,285,667 00	4,634,333 00	98,702,481 00	4,217,519 00
50s .....	30,055,200 00	29,441,590 00	613,610 00	29,497,485 00	557,715 00
100s .....	40,000,000 00	39,078,990 00	921,010 00	39,175,190 00	824,810 00
500s .....	58,988,000 00	58,367,500 00	618,500 00	58,480,000 00	506,000 00
1,000s .....	155,928,000 00	155,115,500 00	812,500 00	155,258,500 00	669,500 00
Unknown .....		135,000 00		135,000 00	
			17,019,870 00		15,468,361 00
Deduct for unknown denominations destroyed in the Chicago fire .....			135,000 00		135,000 00
<b>Total.....</b>	<b>669,321,676 00</b>	<b>652,436,806 00</b>	<b>16,884,870 00</b>	<b>653,988,315 00</b>	<b>15,333,361 00</b>

**UNITED STATES NOTES, ISSUE OF 1869.**

[Issue began October 19, 1869, and ceased July 25, 1874.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
1s .....	\$42,456,812 00	\$41,217,701 75	\$1,239,110 25	\$41,539,144 05	\$917,667 95
2s .....	50,511,920 00	48,767,121 00	1,744,799 00	49,331,892 20	1,180,027 80
5s .....	50,581,760 00	37,828,425 25	12,753,334 75	39,908,845 75	10,582,914 25
10s .....	85,221,240 00	54,696,916 00	30,524,324 00	58,053,655 00	27,167,585 00
20s .....	73,162,400 00	43,776,050 00	29,386,350 00	46,774,294 00	26,388,106 00
50s .....	30,200,000 00	24,960,110 00	5,239,890 00	25,743,180 00	4,456,820 00
100s .....	37,104,000 00	26,314,130 00	10,789,870 00	27,609,580 00	9,494,420 00
500s .....	44,800,000 00	44,249,500 00	640,500 00	44,341,500 00	548,500 00
1,000s .....	79,700,000 00	51,749,000 00	27,951,000 00	68,028,000 00	11,672,000 00
Unknown .....		865,000 00		865,000 00	
			120,269,178 00		92,408,041 00
Deduct for unknown denominations destroyed in the Chicago fire .....			865,000 00		865,000 00
<b>Total.....</b>	<b>493,828,132 00</b>	<b>374,423,954 00</b>	<b>119,404,178 00</b>	<b>402,285,091 00</b>	<b>91,543,041 00</b>

## No. 20.—UNITED STATES CURRENCY, &amp;c.—Continued

## UNITED STATES NOTES, ISSUE OF 1874.

[Issue began July 13, 1874, and ceased September 13, 1875.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
1s .....	\$18,088,000 00	\$17,649,070 80	\$1,338,949 20	\$18,274,804 00	\$713,192 00
2s .....	16,320,000 00	14,668,974 20	1,651,025 80	13,764,251 00	2,555,747 00
50s .....	24,400,000 00	9,844,980 00	14,555,040 00	10,873,645 00	13,681,395 00
500s .....	26,000,000 00	14,968,000 00	11,032,000 00	21,294,000 00	4,738,000 00
Total .....	84,808,000 00	57,130,025 00	30,671,970 00	64,426,096 00	24,144,214 00

## UNITED STATES NOTES, ISSUE OF 1875.

[Issue began July 20, 1875, and ceased June 30, 1879.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
1s .....	\$26,212,000 00	\$16,980,233 80	\$9,231,766 20	\$20,834,654 20	\$5,377,345 80
2s .....	23,038,000 00	10,800,138 20	12,237,861 80	14,750,637 00	7,287,362 80
5s .....	46,180,000 00	14,340,483 00	31,839,517 00	18,985,190 00	27,194,327 00
10s .....	23,680,000 00	4,638,184 00	19,041,816 00	6,225,850 00	17,815,966 00
20s .....	25,000,000 00	4,877,780 00	20,122,220 00	6,305,786 00	18,816,434 00
50s .....	2,000,000 00	175,450 00	1,824,550 00	294,250 00	1,530,300 00
100s .....	16,200,000 00	3,634,000 00	12,566,000 00	3,708,180 00	12,857,820 00
500s .....	26,400,000 00	10,121,500 00	16,278,500 00	19,100,500 00	7,178,000 00
Total .....	190,688,000 00	64,917,740 00	125,770,260 00	60,211,560 00	108,558,700 00

## UNITED STATES NOTES, ISSUE OF 1878.

[Issue began February 14, 1878, and still continues.]

Denomination.	Issued to June 30, 1879.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Issued to June 30, 1880.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
1s .....	\$6,171,070 00	\$649,571 00	\$5,521,500 00	\$12,512,000 00	\$2,746,100 00	\$9,765,900 00
2s .....	1,760,000 00	10,000 00	1,550,000 00	9,000,000 00	510,250 00	8,490,750 00
5s .....	7,840,000 00	219,543 00	7,620,457 00	27,500,000 00	1,481,105 00	26,018,895 00
10s .....	9,420,000 00	374,075 00	9,045,925 00	26,000,000 00	1,225,550 00	24,774,450 00
20s .....	6,800,000 00	472,036 00	6,327,964 00	24,100,000 00	1,316,620 00	22,783,380 00
50s .....	2,400,000 00	160,750 00	2,239,250 00	4,800,000 00	297,645 00	4,502,355 00
100s .....	7,601,500 00	519,900 00	7,081,600 00	10,734,200 00	746,380 00	9,987,820 00
500s .....	6,500,000 00	193,000 00	6,307,000 00	2,500,000 00	136,000 00	2,164,000 00
1,000s .....	6,500,000 00	193,000 00	6,307,000 00	7,200,000 00	3,000,000 00	4,200,000 00
5,000s .....	4,000,000 00	5,000 00	3,995,000 00	5,000,000 00	4,325,000 00	675,000 00
10,000 .....	2,010,000 00	50,000 00	1,960,000 00	5,000,000 00	4,500,000 00	400,000 00
Total .....	56,447,570 00	2,662,874 00	53,784,700 00	124,603,200 00	20,263,250 00	114,339,950 00

## UNITED STATES NOTES, ISSUE OF 1880.

[Issue began March 16, 1880, and still continues.]

Denomination.	Issued to June 30, 1880.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
1s .....	\$2,716,000 00	.....	\$2,716,000 00
2s .....	4,000,000 00	.....	4,000,000 00
Total .....	6,716,000 00	.....	6,716,000 00



## No. 20.—UNITED STATES CURRENCY, &amp;c.—Continued.

## ONE-YEAR NOTES OF 1863.

[Issue began February 4, 1864, and ceased June 1, 1864.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
10s .....	\$6,200,000	\$6,190,105	\$9,895	\$6,190,685	\$9,315
20s .....	16,440,000	16,418,560	21,440	16,419,760	20,240
50s .....	8,240,000	8,231,300	8,700	8,231,500	8,500
100s .....	13,640,000	13,630,800	9,200	13,631,200	8,800
Unknown .....		90		90	
			49,235		46,855
Deduct for unknown denominations des- troyed .....			90		90
Total .....	44,520,000	44,470,855	49,145	44,473,235	46,765

## TWO-YEAR NOTES OF 1863.

[Issue began March 16, 1864, and ceased May 30, 1864.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
50s .....	\$6,800,000	\$6,791,400	\$8,600	\$6,792,200	\$7,800
100s .....	9,680,000	9,674,600	5,400	9,675,100	4,900
Total .....	16,480,000	16,466,000	14,000	16,467,300	12,700

## TWO-YEAR COUPON NOTES OF 1863.

[Issue began January 12, 1864, and ceased April 20, 1864.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
50s .....	\$5,905,600	\$5,903,000	\$2,600	\$5,903,050	\$2,550
100s .....	14,484,400	14,475,300	9,100	14,475,600	8,800
500s .....	40,302,000	40,300,500	1,500	40,300,500	1,500
1,000s .....	89,308,000	89,287,000	21,000	89,287,000	21,000
Unknown .....		10,500		10,500	
			34,200		33,850
Deduct for unknown denominations des- troyed .....			10,500		10,500
Total .....	150,000,000	149,976,300	23,700	149,976,650	23,350

## COMPOUND-INTEREST NOTES.

[Issue began June 9, 1864, and ceased July 24, 1866.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
10s .....	\$23,285,200	\$23,247,050	\$38,150	\$23,249,760	\$35,440
20s .....	30,125,840	30,066,990	58,850	30,071,270	54,570
50s .....	60,824,000	60,732,850	91,150	60,737,700	86,300
100s .....	45,094,400	45,044,900	49,500	45,049,400	45,000
500s .....	67,840,000	67,830,000	16,000	67,831,000	15,000
1,000s .....	39,420,000	39,413,000	7,000	39,413,000	7,000
Total .....	266,595,440	266,334,790	260,650	266,352,130	243,310

No. 20.—UNITED STATES CURRENCY, &c.—Continued.

FRACTIONAL CURRENCY, FIRST ISSUE.

[Issue began August 21, 1862, and ceased May 27, 1863.\*]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
5 cents .....	\$2, 242, 889 00	\$1, 214, 047 90	\$1, 028, 841 10	\$1, 214, 379 20	\$1, 028, 509 80
10 cents .....	4, 115, 378 00	2, 870, 501 96	1, 244, 876 04	2, 871, 053 25	1, 244, 324 75
25 cents .....	5, 225, 696 00	4, 185, 321 21	1, 040, 374 79	4, 185, 898 56	1, 039, 797 44
50 cents .....	8, 631, 672 00	7, 659, 182 69	972, 489 31	7, 660, 135 99	971, 536 01
Toal .....	20, 215, 635 00	15, 929, 053 76	4, 286, 581 24	15, 931, 467 00	4, 284, 168 00

\* From June 4, 1866, to September 21, 1866, there were issued and sold as specimens of this issue \$23,175.

FRACTIONAL CURRENCY, SECOND ISSUE.

[Issue began October 10, 1863, and ceased February 23, 1867.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
5 cents .....	\$2, 794, 826 10	\$2, 095, 552 61	\$699, 273 49	\$2, 095, 883 60	\$698, 942 50
10 cents .....	6, 176, 084 30	5, 263, 017 69	913, 066 61	5, 263, 409 67	912, 674 63
25 cents .....	7, 648, 341 25	6, 901, 702 43	746, 638 82	6, 902, 140 78	746, 200 47
50 cents .....	6, 545, 232 00	5, 793, 438 10	751, 793 90	5, 793, 990 95	751, 241 05
Total.....	23, 164, 483 65	20, 053, 710 83	3, 110, 772 82	20, 055, 425 00	3, 109, 058 65

FRACTIONAL CURRENCY, THIRD ISSUE.

[Issue began December 5, 1864, and ceased April 16, 1869.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
3 cents .....	\$601, 923 90	\$511, 440 52	\$90, 483 38	\$511, 503 78	\$90, 420 12
5 cents .....	657, 002 75	524, 322 03	132, 680 72	524, 417 51	132, 585 24
10 cents .....	16, 976, 134 50	15, 920, 430 48	1, 055, 704 02	15, 922, 410 58	1, 053, 723 92
15 cents .....	1, 352 40	75 22	1, 277 18	75 23	1, 277 18
25 cents .....	31, 143, 188 75	30, 235, 395 98	907, 792 77	30, 237, 649 76	905, 538 99
50 cents .....	36, 735, 426 50	35, 917, 353 55	818, 072 95	35, 923, 220 15	812, 206 35
Total.....	86, 115, 028 80	83, 109, 017 78	3, 006, 011 02	83, 119, 277 00	2, 995, 751 80

FRACTIONAL CURRENCY, FOURTH ISSUE.

[Issue began July 14, 1869, and ceased February 16, 1875.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
10 cents .....	\$34, 940, 960 00	\$33, 542, 118 82	\$1, 398, 841 18	\$33, 553, 017 86	\$1, 387, 942 14
15 cents .....	5, 304, 216 00	5, 053, 282 00	250, 934 00	5, 059, 734 17	244, 481 83
25 cents .....	58, 922, 256 00	57, 856, 050 75	1, 066, 205 25	57, 873, 810 92	1, 048, 445 08
50 cents .....	77, 399, 600 00	76, 247, 075 90	1, 152, 524 10	76, 285, 271 45	1, 114, 328 55
Unknown .....		32, 000 00		32, 000 00	
			3, 868, 504 53		3, 795, 197 60
Deduct for unknown denominations de- stroyed.....			32, 000 00		32, 000 00
Total.....	176, 567, 032 00	172, 730, 527 47	3, 836, 504 53	172, 803, 834 40	3, 763, 197 60

**No. 20.—UNITED STATES CURRENCY, &c.—Concluded.****FRACTIONAL CURRENCY, FIFTH ISSUE.**

[Issue began February 26, 1874, and ceased February 15, 1876.]

Denomination.	Total issued.	Redeemed to June 30, 1879.	Outstanding June 30, 1879.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
10 cents .....	\$19,989,900 00	\$19,427,060 39	\$562,839 61	\$10,462,905 22	\$526,094 78
25 cents .....	30,092,000 00	35,332,607 56	759,392 44	35,415,329 88	076,670 12
50 cents .....	6,580,000 00	6,299,491 55	280,508 45	6,344,948 25	235,051 75
<b>Total.....</b>	<b>62,661,900 00</b>	<b>61,059,159 50</b>	<b>1,602,740 50</b>	<b>61,223,183 35</b>	<b>1,438,716 65</b>

**RECAPITULATION.**

Issue.	Total issued.	Face value of notes redeemed to June 30, 1880 (see State- ment No. 19).	Less deductions for mutila- tions since May 11, 1875, not covered into Treasury.	Redeemed to June 30, 1880, as shown by cash statements.	Outstanding June 30, 1880.
Old Demand Notes ....	\$60,030,000 00	\$59,969,027 50	\$2 50	\$59,969,025 00	\$60,975 00
United States Notes....	1,579,555,947 00	1,232,924,894 00	49,963 00	1,232,874,931 00	346,681,016 00
One and two year Notes of 1863 .....	211,000,000 00	210,917,185 00	.....	210,917,185 00	82,815 00
Compound Interest Notes .....	266,595,440 00	266,352,130 00	.....	266,352,130 00	243,310 00
Fractional Currency...	368,724,079 45	353,149,374 67	16,187 92	353,133,186 75	15,590,892 70
<b>Total.....</b>	<b>2,485,905,466 45</b>	<b>2,123,312,611 17</b>	<b>66,153 42</b>	<b>2,123,246,457 75</b>	<b>362,659,008 70</b>

**No. 21.—SILVER CERTIFICATES, ISSUED, REDEEMED, and OUTSTANDING, by SERIES and DENOMINATIONS.**

Series and denomination.	Issued.		Redeemed.		Outstanding June 30, 1880.
	During fiscal year.	To June 30, 1880.	During fiscal year.	To June 30, 1880.	
<i>Series of 1878.</i>					
10s .....	\$1, 927, 000	\$2, 094, 000	\$23, 490	\$26, 660	\$2, 067, 340
20s .....	1, 890, 000	1, 986, 000	10, 540	11, 120	1, 074, 880
50s .....	1, 195, 000	1, 340, 000	11, 050	11, 050	1, 328, 950
100s .....	1, 449, 000	1, 930, 000	20, 100	25, 400	1, 904, 600
500s .....	750, 000	3, 018, 000	20, 500	1, 788, 500	1, 229, 500
1,000s .....	2, 727, 000	10, 570, 000	98, 000	6, 781, 000	3, 789, 000
<i>Series of 1880.</i>					
10s .....	80, 000	80, 000	.....	.....	80, 000
Total .....	10, 018, 000	21, 018, 000	183, 680	8, 643, 730	12, 374, 270

**No. 22.—SILVER CERTIFICATES, ISSUED, REDEEMED, and OUTSTANDING, at the several OFFICES of ISSUE.**

Office by which issued.	Issued.		Redeemed.		Outstanding.
	During fiscal year.	To June 30, 1880.	During fiscal year.	To June 30, 1880.	
Treasury United States, Wash- ington .....	\$5,905,000	\$6,850,000	\$65,080	\$65,220	\$6,784,780
Sub-Treasury United States, New York .....	1,022,000	1,368,000	12,550	79,300	1,288,700
Sub-Treasury United States, San Francisco .....	3,091,000	12,800,000	106,050	8,499,210	4,300,790
<b>Total.....</b>	<b>10,018,000</b>	<b>21,018,000</b>	<b>183,680</b>	<b>8,643,730</b>	<b>12,374,270</b>

**No. 23.—SEVEN-THIRTY NOTES, ISSUED, REDEEMED, and OUTSTANDING.**

Issue.	Total issued.	Redeemed to June 30, 1879.	Redeemed during fiscal year.	Redeemed to June 30, 1880.	Outstanding June 30, 1880.
July 17, 1861 .....	\$140, 094, 750	\$140, 078, 150	.....	\$140, 078, 150	\$16, 600
August 15, 1864 .....	299, 902, 500	299, 933, 800	\$1, 150	299, 934, 950	57, 550
June 15, 1865 .....	331, 000, 000	330, 963, 050	400	330, 963, 450	38, 550
July 15, 1865 .....	199, 000, 000	198, 943, 100	1, 100	198, 944, 200	55, 800
Total .....	970, 087, 250	969, 918, 100	2, 650	969, 920, 750	166, 500

NOTE.—The public debt statement shows \$144,900 7.30s of 1864 and 1865 outstanding on June 30, 1880, being \$5,000 less than the above, an error having occurred whereby an amount of \$5,000, deducted as redeemed in August, 1868, the settlement of which was afterwards suspended, was again deducted when the suspension was removed.

**No. 24.—COUPONS from UNITED STATES BONDS PAID during the fiscal year 1880, classified by LOANS.**

Title of Loan.	Amount.
Loan of February, 1861 .....	\$239, 847 00
Oregon War Debt .....	57, 090 00
Loan of July and August, 1861 .....	3, 260, 898 00
5-20s of 1862 .....	1, 00 00
Loan of 1863 (81s) .....	1, 064, 162 50
10-40s of 1864 .....	89, 972 50
5-20s of June, 1864 .....	1, 160 50
5-20s of 1865 .....	1, 804 50
Consols of 1865 .....	37, 519 50
Consols of 1867 .....	265, 953 00
Consols of 1868 .....	207, 688 50
Funded Loan of 1881 .....	12, 267, 496 45
Funded Loan of 1891 .....	3, 978, 595 56
Funded Loan of 1907 .....	10, 006, 413 85
Total .....	31, 479, 603 86

**No. 25.—CHECKS for QUARTERLY INTEREST on the FUNDED LOANS of the UNITED STATES ISSUED, PAID, and OUTSTANDING.**

	Funded Loan of 1881; 36,937 Checks issued.	Funded Loan of 1891; 45,449 Checks issued.	Funded Loan of 1907; 214,550 Checks issued.
Amount of Checks outstanding July 1, 1879 .....	\$124, 339 22	\$129, 887 67	\$28, 930 67
Amount of Checks issued during the fiscal year .....	14, 016, 454 37	7, 557, 039 00	19, 145, 882 67
	14, 140, 793 59	7, 686, 926 67	19, 174, 813 34
Paid by Treasurer United States, Washington .....	327, 607 95	54, 417 43	243, 965 61
Paid by Assistant Treasurers United States—New York...	9, 653, 368 88	4, 825, 003 31	13, 158, 243 50
Boston .....	1, 876, 824 24	1, 667, 643 94	2, 472, 529 00
Philadelphia .....	1, 419, 575 89	462, 554 68	1, 077, 530 50
Baltimore .....	279, 477 37	199, 900 20	212, 586 00
Cincinnati .....	319, 279 92	127, 094 95	467, 053 50
Chicago .....	94, 608 11	109, 313 65	794, 542 00
Saint Louis .....	46, 300 60	37, 917 39	197, 620 50
New Orleans .....	8, 085 62	75, 226 98	292, 079 00
San Francisco .....	20, 822 50	5, 436 50	125, 168 00
Total paid .....	14, 052, 011 08	7, 564, 509 03	19, 041, 317 61
Amount outstanding June 30, 1880 .....	88, 782 51	122, 417 64	133, 495 73

**No. 26.—UNITED STATES BONDS purchased for the SINKING FUND during the fiscal year 1880, showing the AMOUNT PAID for PRINCIPAL, INTEREST, AND PREMIUM.**

Title of loan.	Coupon.	Registered.	Principal.	Interest accrued to date of purchase.	Net premium.
Loan of February, 1861.....	\$621, 000	\$2, 216, 000	\$2, 837, 000	\$47, 540 20	\$74, 161 95
Oregon War Debt.....	202, 550	.....	202, 550	3, 662 56	8, 273 02
Loan of July and August, 1861.	12, 465, 700	19, 598, 550	32, 064, 250	518, 148 79	1, 376, 085 04
Loan of 1863 (81s).....	5, 152, 450	7, 644, 700	12, 797, 150	213, 179 29	549, 085 18
Funded Loan of 1881.....	20, 845, 050	2, 730, 400	23, 575, 450	130, 349 36	662, 206 97
Funded Loan of 1907.....	950, 000	550, 000	1, 500, 000	10, 191 74	125, 558 26
<b>Total.....</b>	<b>40, 236, 750</b>	<b>32, 739, 650</b>	<b>72, 976, 400</b>	<b>923, 071 94</b>	<b>2, 795, 320 42</b>

**No. 27.—TOTAL amount of UNITED STATES BONDS RETIRED for the SINKING FUND.**

Title of Loan.	How retired.	To June 30, 1879.	During fiscal year.	To June 30, 1880.
Loan of February, 1861.....	Purchased.....	.....	\$2, 837, 000	\$2, 837, 000
Oregon War Debt.....	.....do.....	.....	202, 550	202, 550
Loan of July and August, 1861.....	.....do.....	.....	32, 064, 250	32, 064, 250
5-20s of 1863.....	Purchased.....	\$24, 029, 150	.....	24, 029, 150
	Redeemed.....	29, 960, 850	100	29, 960, 950
	<b>Total.....</b>	<b>53, 990, 000</b>	<b>100</b>	<b>53, 990, 100</b>
Loan of 1863 (81s).....	Purchased.....	.....	12, 797, 150	12, 797, 150
10-40s of 1864.....	Redeemed.....	.....	676, 050	676, 050
5-20s of March, 1864.....	.....do.....	361, 600	.....	361, 600
5-20s of June, 1864.....	Purchased.....	18, 356, 100	.....	18, 356, 100
	Redeemed.....	11, 067, 550	150	11, 067, 700
	<b>Total.....</b>	<b>29, 423, 650</b>	<b>150</b>	<b>29, 423, 800</b>
5-20s of 1865.....	Purchased.....	16, 866, 150	.....	16, 866, 150
	Redeemed.....	1, 978, 850	350	1, 974, 200
	<b>Total.....</b>	<b>18, 840, 000</b>	<b>350</b>	<b>18, 840, 350</b>
Consols of 1865.....	Purchased.....	48, 166, 150	.....	48, 166, 150
	Redeemed.....	31, 350	.....	31, 350
	<b>Total.....</b>	<b>48, 197, 500</b>	.....	<b>48, 197, 500</b>
Consols of 1867.....	Purchased.....	32, 115, 600	.....	32, 115, 600
	Redeemed.....	15, 750	.....	15, 750
	<b>Total.....</b>	<b>32, 131, 350</b>	.....	<b>32, 131, 350</b>
Consols of 1868.....	Purchased.....	2, 213, 800	.....	2, 213, 800
	Redeemed.....	8, 600	.....	8, 600
	<b>Total.....</b>	<b>2, 222, 400</b>	.....	<b>2, 222, 400</b>
Funded Loan of 1881.....	Purchased.....	.....	23, 575, 450	23, 575, 450
Funded Loan of 1907.....	.....do.....	.....	1, 500, 000	1, 500, 000
	<b>Total purchased.....</b>	<b>142, 108, 550</b>	<b>72, 976, 400</b>	<b>215, 084, 950</b>
	<b>Total redeemed.....</b>	<b>43, 057, 900</b>	<b>676, 650</b>	<b>43, 734, 550</b>
<b>Aggregate.....</b>	.....	<b>185, 166, 450</b>	<b>73, 653, 050</b>	<b>258, 819, 500</b>

**No. 28.—TOTAL amount of UNITED STATES BONDS RETIRED from March 11, 1869, to June 30, 1880.**

Title of Loan.	How retired.	Rate of interest.	From March 11, 1869, to June 30, 1879.	During fiscal year.	To June 30, 1880.
		<i>Per ct.</i>			
Loan of February, 1861 .....	Purchased .....	6	.....	\$2, 837, 000	\$2, 837, 000
Oregon War Debt .....	Purchased .....	6	.....	202, 550	202, 550
	Redeemed .....	6	\$200, 750	.....	200, 750
	Total .....	.....	200, 750	202, 550	403, 300
Loan of July and August, 1861 ..	Purchased .....	6	.....	32, 064, 250	32, 064, 250
5-20s of 1862 .....	Purchased .....	6	57, 155, 850	.....	57, 155, 850
	Redeemed .....	6	430, 122, 250	9, 100	430, 131, 350
	Converted .....	6	27, 091, 000	.....	27, 091, 000
	Total .....	.....	514, 369, 100	9, 100	514, 378, 200
Loan of 1863 (81s) .....	Purchased .....	6	.....	12, 797, 150	12, 797, 150
5-20s of March, 1864 .....	Purchased .....	6	1, 119, 800	.....	1, 119, 800
	Redeemed .....	6	2, 382, 200	.....	2, 382, 200
	Converted .....	6	380, 500	.....	380, 500
	Total .....	.....	3, 882, 500	.....	3, 882, 500
5-20s of June, 1864 .....	Purchased .....	6	43, 450, 750	.....	43, 450, 750
	Redeemed .....	6	69, 811, 100	3, 550	69, 814, 650
	Converted .....	6	12, 218, 650	.....	12, 218, 650
	Total .....	.....	125, 480, 500	3, 550	125, 493, 050
5-20s of 1865 .....	Purchased .....	6	36, 023, 350	.....	36, 023, 350
	Redeemed .....	6	157, 571, 650	81, 100	157, 602, 750
	Converted .....	6	9, 586, 600	.....	9, 586, 600
	Total .....	.....	203, 181, 600	81, 100	203, 212, 700
Consols of 1865 .....	Purchased .....	6	118, 950, 550	.....	118, 950, 550
	Redeemed .....	6	203, 744, 900	987, 500	204, 732, 400
	Converted .....	6	8, 703, 600	.....	8, 703, 600
	Total .....	.....	331, 399, 050	987, 500	332, 386, 550
Consols of 1867 .....	Purchased .....	6	62, 846, 950	.....	62, 846, 950
	Redeemed .....	6	268, 977, 050	38, 894, 250	307, 871, 300
	Converted .....	6	5, 807, 500	.....	5, 807, 500
	Exchanged .....	6	761, 100	.....	761, 100
	Total .....	.....	338, 392, 600	38, 894, 250	377, 286, 850
Consols of 1868 .....	Purchased .....	6	4, 794, 050	.....	4, 794, 050
	Redeemed .....	6	17, 385, 100	19, 351, 250	36, 736, 350
	Converted .....	6	211, 750	.....	211, 750
	Exchanged .....	6	44, 900	.....	44, 900
	Total .....	.....	22, 435, 800	19, 351, 250	41, 787, 050
Total of six per cents .....	.....	.....	1, 539, 350, 900	107, 177, 700	1, 646, 528, 600
Texas indemnity .....	Redeemed .....	5	*4, 979, 000	.....	4, 979, 000
Loan of 1858 .....	Redeemed .....	5	5, 995, 000	40, 000	6, 035, 000
	Converted .....	5	13, 957, 000	.....	13, 957, 000
	Total .....	.....	19, 952, 000	40, 000	19, 992, 000
10-40s of 1864 .....	Redeemed .....	5	54, 052, 650	135, 769, 750	189, 822, 400
	Exchanged .....	5	2, 089, 500	.....	2, 089, 500
	Total .....	.....	56, 142, 150	135, 769, 750	191, 911, 900
Funded Loan of 1881 .....	Purchased .....	5	.....	23, 575, 450	23, 575, 450
	Redeemed .....	5	9, 553, 800	.....	9, 553, 800
	Total .....	.....	9, 553, 800	23, 575, 450	33, 129, 250
Total of five per cents .....	.....	.....	90, 626, 950	159, 385, 200	250, 012, 150
Funded Loan of 1907 .....	Purchased .....	4	.....	1, 500, 000	1, 500, 000

\* This amount includes redemptions prior to March 11, 1869.



**No. 28.—TOTAL amount of UNITED STATES BONDS RETIRED, &c.—Concluded.****RECAPITULATION.**

	From March 11, 1879, to June 30, 1879.	During fis- cal year.	To June 30, 1880.
Purchased .....	\$324, 350, 300	\$72, 976, 400	\$397, 326, 700
Redeemed .....	1, 224, 775, 450	195, 086, 500	1, 419, 861, 950
Converted .....	77, 956, 600	.....	77, 956, 600
Exchanged .....	2, 895, 500	.....	2, 895, 500
Aggregate .....	1, 629, 977, 850	268, 062, 900	1, 898, 040, 750

**No. 29.—INTEREST on 3.65 BONDS of the DISTRICT of COLUMBIA PAID during the fiscal year 1880.**

Where paid.	Coupons.	Registered interest.		Total paid.
		Checks issued.	Checks paid.	
Treasury United States, Washington .....	\$45, 462 68	\$249, 514 00	\$30, 310 50	\$84, 773 18
Sub-Treasury United States, New York .....	198, 085 50	.....	209, 491 75	407, 577 25
Total .....	243, 548 18	249, 514 00	248, 802 25	492, 850 43

**No. 30.—NUMBER of PACKAGES and AMOUNT of NATIONAL-BANK NOTES RECEIVED for REDEMPTION during each MONTH of the FISCAL YEAR 1880.**

Month.	Number of packages.	Amount.
1879.		
July .....	1, 468	\$9, 123, 424 75
August .....	1, 283	6, 314, 586 01
September .....	1, 201	4, 508, 040 72
October .....	1, 197	3, 349, 766 85
November .....	1, 104	3, 251, 633 76
December .....	1, 219	2, 922, 489 87
1880.		
January .....	1, 376	5, 641, 192 27
February .....	1, 188	3, 960, 505 06
March .....	1, 347	3, 144, 810 88
April .....	1, 368	4, 006, 204 91
May .....	1, 434	7, 554, 659 92
June .....	1, 422	7, 808, 361 18
Total .....	15, 607	61, 583, 675 68

**No. 31.—MODE of PAYMENT for NATIONAL-BANK NOTES REDEEMED during the fiscal year 1880.**

By Transfer Checks on Assistant Treasurers of the United States .....	\$10, 852, 505 53
By United States Notes forwarded by express .....	21, 174, 826 66
By Subsidiary Silver Coin forwarded by express .....	28, 230 59
By Standard Silver Dollars forwarded by express .....	174, 831 85
By Redemptions at the Counter .....	3, 883, 417 60
By Credits to Assistant Treasurers and Depositaries of the United States in general account .....	18, 218, 070 37
By Credits to National Banks in their five per cent. accounts .....	6, 924, 097 88
Total .....	61, 255, 980 48

**No. 22.—NATIONAL-BANK NOTES RECEIVED for REDEMPTION during each MONTH of the FISCAL YEAR 1880, from the PRINCIPAL CITIES and other places.**

City from which received.	1880.												Per Cent.
	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	Total.
New York.....	\$2,538,000	\$2,047,000	\$1,121,000	\$946,000	\$905,000	\$827,000	\$1,108,000	\$1,708,000	\$1,023,000	\$1,761,000	\$4,675,000	\$4,841,000	\$28,480,000
Boston.....	3,332,000	2,403,000	1,251,000	636,000	720,000	358,000	652,000	649,000	296,000	246,000	553,000	733,000	11,701,000
Philadelphia.....	416,000	241,000	262,000	241,000	216,000	213,000	245,000	210,000	171,000	326,000	378,000	439,000	3,338,000
Chicago.....	100,000	98,000	155,000	134,000	122,000	131,000	139,000	142,000	164,000	163,000	154,000	170,000	1,673,000
Cincinnati.....	53,000	40,000	69,000	53,000	48,000	54,000	72,000	61,000	71,000	60,000	145,000	91,000	819,000
Baltimore.....	20,000	25,000	31,000	22,000	20,000	19,000	37,000	28,000	41,000	51,000	44,000	42,000	392,000
Providence.....	22,000	18,000	18,000	17,000	21,000	16,000	24,000	22,000	27,000	32,000	60,000	122,000	415,000
Pittsburgh.....	194,000	191,000	139,000	132,000	100,000	71,000	109,000	68,000	100,000	97,000	122,000	131,000	1,454,000
Other places.....	31,000	31,000	39,000	60,000	31,000	46,000	48,000	41,000	44,000	56,000	64,000	56,000	547,000
Total.....	9,123,000	6,315,000	4,508,000	3,250,000	3,252,000	2,922,000	5,641,000	3,961,000	3,145,000	4,006,000	7,556,000	7,808,000	61,588,000

**No. 23.—NUMBER and AMOUNT of NATIONAL-BANK NOTES of each denomination, FIT and UNFIT for CIRCULATION, ASSORTED during the fiscal year 1880.**

Denomination.	Fit for circulation.		Unfit for circulation.		Aggregate.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
One Dollar.....	1,317,800	\$1,205,120	1,317,800	\$1,205,120	1,317,800	\$1,205,120
Two Dollars.....	450,485	879,250	450,485	879,250	450,485	879,250
Five Dollars.....	3,705,742	18,528,710	3,705,742	18,528,710	3,705,742	18,528,710
Ten Dollars.....	1,472,728	14,727,280	1,472,728	14,727,280	1,472,728	14,727,280
Twenty Dollars.....	465,689	9,313,780	465,689	9,313,780	465,689	9,313,780
Fifty Dollars.....	75,202	3,760,100	75,202	3,760,100	75,202	3,760,100
One hundred Dollars.....	58,775	5,877,500	58,775	5,877,500	58,775	5,877,500
Five hundred Dollars.....	242	121,000	242	121,000	242	121,000
One thousand Dollars.....	252	252,000	252	252,000	252	252,000
Total.....	7,578,175	29,880,000	7,578,175	29,880,000	7,578,175	29,880,000

*Average denomination of national bank notes assorted during the fiscal year 1880.*

Average denomination of Notes fit for circulation assorted.....	\$10.25
Average denomination of Notes unfit for circulation assorted.....	5.81
Average denomination of all Notes assorted.....	7.24

**No. 34.—BALANCED STATEMENT of RECEIPTS and DELIVERIES of MONEYS**  
by the NATIONAL-BANK REDEMPTION AGENCY from JULY 1, 1874, to JUNE 30, 1880.

DR.	Amount.	CR.	Amount.
To National-Bank Notes received for redemption.....	\$1,022,776,157 76	By packages referred to other offices and returned by mail..	\$4,983 501 15
To United States Notes drawn from the Treasury for redemption of National-Bank Notes at the counter .....	17,062,732 00	By "Shorts" reported in National-Bank Notes received for redemption.....	102,273 11
To "Overs" reported in National-Bank Notes received for redemption .....	132,391 77	By counterfeit National-Bank Notes rejected and returned..	25,433 75
		By stolen, pieced, and rejected National-Bank Notes returned	45,643 19
		By express charges deducted from remittances of National-Bank Notes.....	35,780 56
		By United States Notes deposited in the Treasury.....	1,387,818 00
		By Notes of National Gold Banks deposited in the Treasury .....	243,600 00
		By National-Bank Notes fit for circulation deposited in the Treasury .....	15,952,791 00
		By Notes of failed, liquidating, and reducing National Banks deposited in the Treasury....	82,581,267 00
		By assorted National-Bank Notes fit for circulation forwarded by express to the several National Banks .....	553,592,100 00
		By assorted National-Bank Notes unfit for circulation delivered to the Comptroller of the Currency for destruction and replacement with new Notes.....	377,923,000 00
		By Cash Balance June 30, 1880..	3,097,983 77
<b>Total.....</b>	<b>1,039 971,281 53</b>	<b>Total.....</b>	<b>1,039,971,281 53</b>

**No. 35.—BALANCED STATEMENT of RECEIPTS and DELIVERIES of MONEYS**  
by the NATIONAL-BANK REDEMPTION AGENCY for the FISCAL YEAR 1880.

DR.	Amount.	CR.	Amount.
To Cash Balance June 30, 1879...	\$3,784,580 29	By packages referred to other offices and returned by mail..	\$305,432 14
To uncounted package on hand with unbroken seals, June 30, 1879.....	800 00	By "Shorts" reported in National-Bank Notes received for redemption.....	9,868 97
To National-Bank Notes received for redemption.....	61,585,075 68	By counterfeit National-Bank Notes rejected and returned..	3,846 75
To "Overs" reported in National-Bank Notes received for redemption .....	6,461 30	By stolen, pieced, and rejected National-Bank Notes returned	7,870 23
		By express charges deducted from remittances of National-Bank Notes.....	9,938 41
		By United States Notes deposited in the Treasury.....	428,686 00
		By Notes of National Gold Banks deposited in the Treasury .....	170,900 00
		By Notes of failed, liquidating, and reducing National Banks deposited in the Treasury....	6,500,800 00
		By assorted National-Bank Notes fit for circulation forwarded by express to the several National Banks .....	24,980,500 00
		By assorted National-Bank Notes unfit for circulation delivered to the Comptroller of the Currency for destruction and replacement with new Notes.....	29,861,700 00
		By Cash Balance June 30, 1880..	3,097,983 77
<b>Total.....</b>	<b>5,377 526 27</b>	<b>Total.....</b>	<b>65,377,526 27</b>

**No. 36.—DISPOSITION made of NATIONAL-BANK NOTES REDEEMED during the fiscal year 1880.**

Notes, fit for circulation, assorted and forwarded by express to the several National Banks by which they were issued.....	\$24,980,563 00
Notes, unfit for circulation, assorted and delivered to the Comptroller of the Currency for destruction and replacement with new Notes .....	29,861,700 00
Notes of failed, liquidating, and reducing National Banks, deposited in the Treasury of the United States.....	6,500,800 00
Notes of National Gold Banks deposited in the Treasury of the United States.....	170,900 00
<b>Total .....</b>	<b>61,513,963 00</b>

**No. 37.—CREDITS given to NATIONAL BANKS in their FIVE PER CENT. ACCOUNTS during the fiscal year 1880.**

For United States Notes deposited by them with Assistant Treasurers of the United States.....	\$46,960,242 06
For United States Notes received from them by express.....	2,627,861 16
For National-Bank Notes received from them by express.....	6,924,097 88
<b>Total .....</b>	<b>56,512,201 10</b>

**No. 38.—NUMBER of PACKAGES of NATIONAL-BANK NOTES RECEIVED and DELIVERED during the fiscal year 1880.**

Packages of unassorted National-Bank Notes received for redemption.....	15,607
Packages of assorted National-Bank Notes, fit for circulation, forwarded by express to the several banks of issue .....	18,753
Packages of assorted National-Bank Notes, unfit for circulation, delivered to the Comptroller of the Currency.....	27,104

**No. 39.—COMPARATIVE STATEMENT of the EXPENSES incurred in the REDEMPTION of NATIONAL-BANK NOTES during the fiscal years 1879 and 1880.**

Nature of expenditure.	Amount expended in 1879.		Amount expended in 1880.		Decrease in 1880.	
Charges for transportation.....		\$98,298 75		\$34,764 24		\$63,534 51
Costs for assorting:						
Salaries.....	\$133,956 27		\$104,350 08		\$29,606 19	
Printing and binding .....	2,894 60		2,632 69		261 91	
Stationery .....	2,597 22		1,034 29		1,562 93	
Contingent expenses.....	3,203 11	142,651 20	947 09	108,964 15	2,256 02	33,687 05
<b>Total .....</b>		<b>240,949 95</b>		<b>143,728 39</b>		<b>97,221 56</b>

**No. 40.—LETTERS, TELEGRAMS, and MONEY PACKAGES RECEIVED and TRANSMITTED during the fiscal year 1880.**

<b>Received by mail:</b>	
Letters containing money, registered .....	5,744
Letters containing money, not registered .....	5,179
	10,923
Letters not containing money .....	107,860
<b>Total .....</b>	<b>118,783</b>
<b>Transmitted by mail:</b>	
Manuscript letters.....	6,491
Registered letters containing money .....	5,874
Printed forms filled in (inclosing checks) .....	37,218
Printed notices (inclosing interest checks) .....	296,936
Printed forms filled in (without inclosure).....	145,405
Printed forms filled in (inclosing drafts) .....	26,578
<b>Total .....</b>	<b>519,102</b>
Telegrams received .....	284
Telegrams sent .....	458
Money packages received by express .....	29,784
Money packages transmitted by express.....	32,977

No. 41.—CHANGES during the fiscal year 1880 in the FORCE EMPLOYED in the TREASURER'S OFFICE.

Total force of the Treasurer's Office June 30, 1879 .....	824
Died .....	4
Resigned .....	5
Removed .....	46
Transferred from the Treasurer's Office.....	19
Appointments expired .....	12
	86
Appointed .....	84
Transferred to the Treasurer's Office.....	18
	52
	84
Total force of the Treasurer's Office June 30, 1880.....	290

No. 42.—APPROPRIATIONS made for, and SALARIES paid to, the FORCE EMPLOYED in the TREASURER'S OFFICE during the fiscal year 1880.

Roll on which paid.	Appropriated.	Expended.	Balance unex- pended.
Regular roll .....	\$273, 000 00	\$273, 588 93	\$11 07
Reimbursable:			
Force employed in redemption of National Currency.	101, 584 00	82, 144 88	19, 439 12
Total.....	375, 184 00	355, 733 81	19, 450 19

REPORT OF THE REGISTER OF THE TREASURY.

TREASURY DEPARTMENT,  
REGISTER'S OFFICE,  
Washington, November 1, 1880.

SIR: I have the honor to submit herewith a report in detail of the work performed in the several divisions of this bureau during the year ended June 30, 1880.

LOAN DIVISION.

Total number of coupon and registered bonds issued .....	214, 502
Total number of coupon and registered bonds canceled .....	676, 715

Amount issued:

Original issue, coupon.....	\$56, 299, 600 00
Original issue, registered .....	21, 364, 100 00
Coupon bonds issued on transfer Oregon war debt .....	8, 400 00
Registered bonds issued on transfer (including Spanish indemnity).	289, 637, 979 00
Registered bonds issued in exchange for coupon .....	129, 207, 600 00
Total .....	496, 517, 679 00

Amount canceled:

Coupon bonds converted into registered .....	\$129, 207, 600 00
Coupon bonds transferred (Oregon war debt) .....	8, 400 00
Registered bonds transferred (including Spanish indemnity).....	289, 637, 979 00
Registered bonds redeemed.....	277, 070, 200 00
Coupon bonds redeemed.....	188, 657, 250 00
Total .....	884, 581, 429 00

A synopsis of the vault account shows that the amount of bonds on hand July 1, 1879, including those held by Treasury agent abroad was.....

Received during the present year, coupon bonds.....	\$1, 013, 866, 200 00
Received during the present year, registered bonds .....	31, 500, 000 00
District of Columbia 3.65 per cent. and 5 per cent. funding bonds..	127, 172, 000 00
	8, 010, 000 00
Total .....	1, 180, 548, 200 00

Amount disposed of:

Coupon bonds issued.....	\$56, 308, 000 00
Registered bonds issued (exclusive of Spanish indemnity).....	440, 162, 900 00

Amount on hand June 30, 1880:

Coupon bonds .....	\$38, 118, 950 00
Registered bonds .....	642, 699, 650 00
District of Columbia 3.65 per cent. and 5 per cent. funding bonds .....	3, 258, 700 00
	684, 077, 300 00
Total.....	1, 180, 548, 200 00

Amount of canceled coupon bonds turned over to the committee for destruction.....	\$333, 106, 600 00
In addition to above delivery were 643,677 canceled coupons representing value of.....	\$4, 384, 213 50
being the coupons past due detached from bonds at the time of issue.	
The amount of actual redemptions, being for called bonds and purchases on account of sinking funds received during the year, was.	\$598, 689, 000 00
Number of bonds for same .....	708, 256
Amount recorded for final disposition.....	\$465, 727, 450 00
Number of bonds .....	445, 130

STATEMENT showing the NUMBER and AMOUNT of REGISTERED and COUPON BONDS ISSUED during the fiscal year ending June 30, 1880.

Loans.	Bonds issued.				
	Original amount.	Exchanges, amount.	Transfers, amount.	Total amount issued.	Total number bonds issued.
Oregon war .....	C .....		\$8, 400	\$8, 400	24
February 8, 1861 (81s) .....	R .....	\$786, 000	2, 935, 000	3, 721, 000	653
July and August, 1861 (81s) .....	R .....	2, 605, 950	14, 831, 850	17, 437, 800	3, 796
March 8, 1868 (81s) .....	R .....	447, 450	7, 474, 000	7, 922, 050	1, 992
Pacific Railroads .....	R .....		6, 281, 000	6, 281, 000	1, 321
5 per cent. funded, 1881 .....	R .....	80, 716, 000	50, 444, 850	81, 160, 850	12, 980
4½ per cent. funded, 1891 .....	R .....	5, 196, 600	29, 160, 350	34, 356, 950	9, 522
4 per cent. consols, 1907.....	{ C .....	\$55, 316, 300		55, 316, 300	80, 928
	{ R .....	21, 255, 100	87, 547, 600	285, 069, 250	100, 888
Spanish indemnity .....	R .....		46, 779	46, 779	9
3.65 per cent. District of Columbia, funded .....	R .....	1, 908, 000	2, 152, 000	4, 060, 000	1, 168
5 per cent. District of Columbia, funded .....	{ C .....	983, 300		983, 300	1, 067
	{ R .....	109, 000	45, 000	154, 000	154
Total.....		77, 663, 700	129, 207, 600	289, 646, 379	496, 517, 679



**STATEMENT showing the NUMBER and AMOUNT of REGISTERED and COUPON BONDS CANCELED during the fiscal year ending June 30, 1900.**

Loans.		Bonds canceled.				Total number bonds canceled.
		Redemptions, amount.	Exchanges, amount.	Transfers, amount.	Total amount canceled.	
Oregon war debt .....	C	\$178,750		\$8,400	\$188,150	117
February 4, 1861 (81a) .....	C	110,000	\$788,000		898,000	898
	R	1,916,000		2,935,000	4,851,000	1,396
July and August, 1861 (81a) .....	C	7,292,300	2,605,950		9,898,250	18,876
	R	17,329,700		14,831,850	32,161,550	8,143
March 3, 1863 (81a) .....	C	8,153,050	447,450		8,600,500	5,038
	R	7,000,050		7,474,600	14,474,650	3,790
Pacific Railroads .....	R			6,281,000	6,281,000	1,398
5 per cent. funded, 1881 .....	C	7,897,800	30,716,000		38,613,800	45,868
	R	2,867,100		50,444,850	53,311,950	12,150
4 1/2 per cent. funded, 1891 .....	C		6,196,600		6,196,600	6,649
	R			29,180,350	29,180,350	7,455
6 per cent. consols, 1907 .....	C		87,647,600		87,647,600	117,541
	R			176,286,650	176,286,650	56,588
Spanish indemnity .....	R			46,779	46,779	19
2 1/2 per cent. District of Colum- bia, funded .....	C	221,450	1,908,000		2,129,450	4,321
	R	15,000		2,152,000	2,167,000	615
5 per cent. District of Columbia, funded .....	R			45,000	45,000	45
5 per cent. 1858 .....	R	260,000			260,000	52
1862—February 25 .....	C	17,500			17,500	102
	R	200			200	2
1864—March 3 .....	C	28,902,800			28,902,800	41,293
	R	141,887,150			141,887,150	29,471
1864—June 30 .....	C	9,300			9,300	37
	R	800			800	4
1865—March 3 .....	C	60,300			60,300	129
	R	5,900			5,900	11
1865—Consols .....	C	46,985,100			46,985,100	100,792
	R	238,950			238,950	246
1867—Consols .....	C	77,190,300			77,190,300	150,638
	R	90,950,850			90,950,850	29,214
1868—Consols .....	C	16,627,600			16,627,600	34,438
	R	14,569,500			14,569,500	5,082
<b>Total .....</b>		<b>465,727,450</b>	<b>120,307,600</b>	<b>289,646,379</b>	<b>855,681,429</b>	<b>676,715</b>

**NOTE AND COUPON DIVISION.**

**REDEEMED, EXCHANGED, and TRANSFERRED UNITED STATES BONDS, with COUPONS ATTACHED, EXAMINED, REGISTERED, and SCHEDULED.**

Authorizing act.	Number of bonds.	Amount.	Number coupons attached.
March 3, 1865 (consols, '65) .....	80,438	\$47,485,500	1,206,416
Funded loan, 1861, 5 per cent .....	46,573	38,250,000	233,225
Consols, 1907, 4 per cent .....	98,213	78,215,300	10,897,229
District of Columbia funded, 1924 .....	5,308	2,330,000	466,478
<b>Total .....</b>	<b>229,517</b>	<b>166,230,800</b>	<b>12,703,348</b>

**THREE YEARS' 7 3-10 PER CENT. TREASURY NOTES.**

Authorizing act.	Number of notes.	Amount.
June 30, 1864, and March 3, 1865 .....	39	\$2,650

*INTEREST COIN-CHECKS.*

Authorizing act.	Number of checks.	Amount.
Funded loan, 1891, 5 per cent .....	23, 869	\$9, 157, 853 21
Funded loan, 1891, 4½ per cent .....	9, 262	1, 760, 850 08
Consols, 1907, 4 per cent .....	10, 525	689, 293 19
District of Columbia funded loan (old) .....	1, 185	48, 461 20
Total .....	44, 841	11, 656, 457 68

*CURRENCY CERTIFICATES of DEPOSIT.*

Authorizing act.	Number of certificates.	Amount.
June 8, 1872. ....	12, 486	\$115, 690, 000

*GOLD CERTIFICATES.*

Authorizing act.	Number of certificates.	Amount.
March 8, 1863 .....	8, 337	\$8, 771, 200

*ONE and TWO YEARS' 5 PER CENT. NOTES.*

Authorizing act.	Number of notes.	Amount.
March 8, 1863 .....	151	\$4, 030

*THREE YEARS' 6 PER CENT. COMPOUND-INTEREST NOTES.*

Authorizing act.	Number of notes.	Amount.
March 8, 1863, and June 30, 1864 .....	629	\$17, 340

Redeemed coupons detached from bonds and notes, assorted, arranged numerically, and counted, 2,684,137; registered, 2,824,757; examined and compared, 2,706,836.

**NOTE AND FRACTIONAL CURRENCY DIVISION.**

*STATEMENT showing the NUMBER of NOTES and AMOUNT of UNITED STATES NOTES, REFUNDING CERTIFICATES, and FRACTIONAL CURRENCY EXAMINED, COUNTED, CANCELED, and DESTROYED for the fiscal year ending June 30, 1880.*

United States notes, &c.	Number of notes.	Amount.
New issue .....	151, 087	\$1, 585, 150
Series 1869 .....	1, 609, 564	27, 658, 250
Series 1874 .....	1, 139, 624	8, 946, 650
Series 1875 .....	7, 157, 379	24, 435, 950
Series 1878 .....	4, 762, 637	15, 714, 100
Demand notes .....	67	495
Refunding certificates .....	3, 889, 325	38, 893, 250
Fractional currency, first issue .....	15, 900	2, 315
Fractional currency, second issue .....	12, 700	1, 590
Fractional currency, third issue .....	41, 500	10, 521
Fractional currency, fourth issue .....	237, 700	44, 230
Fractional currency, fourth issue, second series .....	23, 800	11, 900
Fractional currency, fourth issue, third series .....	47, 100	23, 550
Fractional currency, fifth issue .....	812, 400	175, 585
Total .....	19, 900, 783	117, 503, 538

## REGISTERED REFUNDING CERTIFICATES.

Amount issued, 5,850 .....	\$58,500
Amount funded, 5,207 .....	52,070

## TONNAGE DIVISION.

The total tonnage of the country exhibits a decrease of 101,566 tons, the enrolled tonnage having increased 37,751 tons, while the registered tonnage has decreased 138,723 tons, and the licensed, under 20 tons, 594 tons.

The barge tonnage has decreased 83,250 tons under the operation of the act of Congress approved June 30, 1879, leaving 18,316 tons as the estimated decrease in the tonnage during the past year.

Below are given the totals for the last two years:

	1879.		1880.	
	Vessels.	Tons.	Vessels.	Tons.
Registered.....	2,717	1,491,533	2,378	1,352,810
Enrolled and licensed.....	22,494	2,678,067	22,334	2,715,224
Total .....	25,211	4,169,601	24,712	4,068,034

The comparison of the different classes of vessels is as follows:

Class.	1879.		1880.	
	Vessels.	Tons.	Vessels.	Tons.
Sailing vessels.....	17,042	2,422,813	16,830	2,306,288
Steam vessels.....	4,569	1,176,172	4,717	1,211,558
Canal boats .....	1,206	103,738	1,235	106,590
Barges.....	2,394	466,878	1,930	383,628
Total .....	25,211	4,169,601	24,712	4,068,034

It may be seen from the foregoing that the steam tonnage has increased 35,386 tons, the canal-boat tonnage 2,852 tons, while the sailing tonnage has decreased 56,555 tons, and the barge tonnage 83,250 tons.

The proportion of the sailing tonnage registered is 42 per centum and the steam tonnage registered 12 per centum.

## SHIP-BUILDING.

The following table exhibits the class, number, and tonnage of the vessels built during the last two years:

Class.	1879.		1880.	
	Vessels.	Tons.	Vessels.	Tons.
Sailing vessels.....	408	66,867	460	59,057
Steam vessels.....	335	86,361	348	78,854
Canal boats .....	36	4,069	17	1,887
Barges.....	293	35,733	77	17,612
Total .....	1,132	193,030	902	157,416

From the foregoing it appears that the amount built during the past year was less by 35,620 tons than that of the preceding year.

The tonnage built during the last two years in the several grand divisions of the country is shown below :

Division.	1879.		1880.	
	Vessels.	Tons.	Vessels.	Tons.
Atlantic and Gulf coasts.....	592	104,475	589	92,277
Pacific coast.....	65	11,297	41	8,942
Northern lakes.....	95	15,135	137	22,899
Western rivers.....	380	62,213	135	32,791
Total.....	1,132	193,630	903	157,410

The following table exhibits the iron tonnage built in the country since 1868 :

Class.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
Sailing vessels.....		1,039	679	2,067			
Steam vessels.....	2,801	3,545	7,302	13,412	12,766	26,548	33,097
Total.....	2,801	4,584	8,281	15,479	12,766	26,548	33,097

	1875.	1876.	1877.	1878.	1879.	1880.
Sailing vessels.....						44
Steam vessels.....	21,632	21,346	5,927	26,960	22,008	25,538
Total.....	21,632	21,346	5,927	26,960	22,008	25,582

Tables showing the amount of iron tonnage outstanding may be found in the Report on Commerce and Navigation.

#### THE FISHERIES.

The tonnage engaged in the fisheries during the last two years is as follows :

Fisheries.	1879.		1880.	
	Vessels.	Tons.	Vessels.	Tons.
Cod and mackerel fisheries.....	2,571	79,895	2,323	77,538
Whale fisheries.....	185	40,028	174	38,446

Below is shown the amount of tonnage employed in the cod and mackerel fisheries, with the per centum of each State :

States.	Tonnage.	Per cent.
Maine.....	18,785	24.2
New Hampshire.....	1,132	1.5
Massachusetts.....	89,706	51.2
Rhode Island.....	2,306	3.0
Connecticut.....	4,584	5.9
New York.....	8,636	11.1
New Jersey.....	25	0.0
Virginia.....	127	0.2
California.....	2,191	2.7
Oregon.....	70	0.1
Total.....	77,538	100.0

This shows a decrease of about 3 per cent. during the year.

The tonnage employed in the whale fisheries is given below :

Customs districts.	1879.		1880.	
	Vessels.	Tons.	Vessels.	Tons.
Boston, Mass .....	5	581	5	581
Barnstable, Mass .....	20	1,940	19	1,817
Edgartown, Mass .....	4	720	6	1,124
New Bedford, Mass .....	144	35,208	134	33,337
New London, Conn .....	12	1,629	10	1,599
Total .....	185	40,028	174	38,408

Of the above nearly 90 per cent. belongs at New Bedford.

Complete tables showing the various classes of tonnage may be found in the appendix to this report.

DIVISION OF RECEIPTS AND EXPENDITURES.

The following statement exhibits the work of this division for the year ending June 30, 1880 :

The number of warrants registered during the year for civil, diplomatic, miscellaneous, internal revenue, and public-debt expenditures and repayments was .....	20,839
In the preceding year .....	24,025
Decrease .....	3,186
The number of warrants registered for receipts from customs, lands, internal revenue, direct tax, and miscellaneous sources was .....	6,183
In the preceding year .....	11,220
Decrease .....	5,037
The number of warrants registered for payments and repayments in the War, Navy, and Interior (pension and Indian) Departments was .....	11,833
In the preceding year .....	16,797
Decrease .....	4,964
The number of draughts registered was .....	32,179
In the preceding year .....	40,760
Decrease .....	8,581
The number of journal pages required for the entry of accounts relating to the civil, diplomatic, internal revenue, miscellaneous, and public debt receipts and expenditures was .....	5,437
In the preceding year .....	5,432
Increase .....	5
The number of certificates furnished for settlement of accounts was .....	13,489
In the preceding year .....	12,759
Increase .....	730

The number of accounts received from the First and Fifth Auditors and Commissioner of the General Land Office was .....	22, 290
In the preceding year .....	22, 862
	<hr/>
Decrease .....	572

In the appendix will be found a statement of the receipts and expenditures of the government, as required by the standing order of the House of Representatives of December 30, 1791, and section 237 of the Revised Statutes; also, statements of the money expended and the number of persons employed, and the occupation and salary of each person at each custom-house, as required by section 258 of the Revised Statutes.

Very respectfully, your obedient servant,

G. W. SCOFFIELD,  
*Register.*

Hon. JOHN SHERMAN,  
*Secretary of the Treasury.*



# REPORT

## OF THE

# SECRETARY OF WAR.

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WAR DEPARTMENT, *November 19, 1880.*

Mr. PRESIDENT: I have the honor, in obedience to the requirements of the statute, to submit the annual report of the operations of this department during the past year.

### EXPENDITURES, APPROPRIATIONS, AND ESTIMATES.

The expenditures for all affairs under the control of this department for the fiscal year ending June 30, 1880, were \$39,924,773.03.

Congress appropriated for the service of the current fiscal year \$41,993,630.40.

The estimates for the service for the fiscal year ending June 30, 1882, are \$43,627,055.54.

The estimates, in detail, were originally submitted to me for \$62,429,770.21; but on revision of the same, omissions or reductions were made as follows: In the civil establishment, \$13,585; military establishment, \$250,000; public works, \$18,514,129.67; and in the miscellaneous class, \$25,000, making the total of revisory reductions \$18,802,714.67. Some increase in the amounts of estimates for the year 1882 over the amounts appropriated for the year 1881 appears in the civil establishment, the military establishment, and the miscellaneous items. The causes leading to that increase are briefly explained in the details given in the book of estimates, as well as in the reports of chiefs of bureaus. For public works, I have reduced the estimates to accord with what I understand to be the amount required for absolute necessities of the service, in order to prevent waste of property and damage to commercial interests. Beyond such necessities, it is submitted the wisdom of Congress may perceive that, as valuable improvements surround the realty of the government, and as the commerce of the country advances in growth and prosperity, so should the appropriations to cover the expenses be apportioned. These considerations doubtless induce the local authors of such estimates to render full explanations, clearly and elaborately showing the grounds upon which their figures are based,

and such explanations are to be found in their annual reports, as well as in the report of the Chief of Engineers, to which attention is invited for further information under this head.

The Mississippi River Commission, operating in accordance with an act approved June 28, 1879, submitted a report which was duly transmitted to Congress last March, and was published by order of the House of Representatives (Ex. Doc. No. 58). That report exhibited, for the first time, the estimates of appropriations required for works of improvement therein described, amounting to \$5,133,000, and it awaited further consideration when the session closed. The commission has communicated to me its desire to renew those estimates, and its communication will be transmitted to Congress as a matter of special importance, not included, however, in the annual estimates and expenditures for the service of this department.

#### IMPROVEMENT OF THE SOUTH PASS OF THE MISSISSIPPI RIVER.

This improvement reached a point on the 8th day of July, 1879, at which time payments for *creating* the channel ceased and began to depend upon the *maintenance* of the work, at a standard marked out by law, as follows: A navigable channel twenty-six feet deep, at the head of the pass, and "a channel through the jetties, twenty-six feet in depth and not less than two hundred feet in width, at the bottom, and having through it a central depth of thirty feet, without regard to width."

The second series of the government's obligations, in compensation to Mr. James B. Eads, begun when this maximum channel was obtained, to continue with the maintenance of the channel, and to end in 20 years; the award to be as follows: Compensation for maintenance of the channel at the rate of one hundred thousand dollars per annum, to be paid in equal quarterly payments, and interest at 5 per centum per annum, on the one million dollars remaining as security in the possession of the United States, payable semi-annually. In view of an opinion rendered by the Attorney-General, the time of actual maintenance of the channel, as such time is distinguished from the measure of a calendar year, is that for which payments have been made on certified statements of an engineer officer detailed to ascertain and report the depth of water and width of channel.

The certified statements and the payments, as recapitulated, show that in the first quarter, namely, between July 8 and October 29, 1879, dates inclusive, there were 22 days of failure in some part to maintain the channel, and 92 days of maintenance—paid \$25,000; that in the second quarter, namely, from October 30, 1879, to February 15, 1880, dates inclusive, there were 17 days of failure in some part to maintain the channel, and 92 days' maintenance—paid \$25,000 for compensation, and \$25,000 semi-annual interest on the \$1,000,000 retained; third quarter, namely, February 10 to May 9, 1880, maintenance was for the full time—paid \$25,000; and fourth quarter, namely, May 10 to August 9,

1880, maintenance for full time—paid \$25,000 for compensation, and \$25,000 for interest. Total paid as compensation and interest for maintenance of channel, \$150,000; total previously paid for creating the channel, \$4,250,000; aggregate cost to date, \$4,400,000.

The permanency of this important work seems to be assured, from the fact that there has been no failure whatever in the maintenance of the maximum channel during the six months ending on August 9th last. This improvement has opened, through sands and shoals, a broad, deep highway to the ocean, and is one upon the permanent success of which congratulations may be exchanged among people abroad and at home, and especially among the communities of the Mississippi Valley, whose commercial exchanges float in an unobstructed channel safely to and from the sea.

#### THE ARMY.

The "organization of the Army" provides for 11 general officers; 555 officers and 1,286 enlisted men for the staff; 1,989 officers and 24,214 enlisted men for the line. Of these latter 694 are detailed as clerks, or are recruits unassigned to regiments, reducing the possible force for military service to 23,520 enlisted men.

The General of the Army in his report, to which, with the accompanying reports of division and department commanders, attention is invited, notes the fact that the actual force must, at all times, be kept below that figure; that there must always be allowed for "sick," "detached service," and other unavoidable causes, at least ten per cent., reducing the available force to about 20,000 enlisted men. The General and Lieutenant-General of the Army concur in the opinion that the Army is too small in enlisted men to fulfill the heavy duties now imposed on it, and that it is overworked. The General renews his recommendation of last year that Congress be requested to give 25,000 enlisted men, *specifically*, to the troops of the line of the Army, and to make separate provision for the detachments of ordnance men, engineer battalion, hospital stewards, commissary-sergeants, West Point detachments, detailed clerks, &c., in the same manner as has already been done for the Signal Corps; in which I fully concur. The strength of the Army is limited by statute (section 1115, Revised Statutes) to not more than 30,000 enlisted men, but provisos contained in appropriation bills have limited expenditures to the enlistment of but 25,000. It is believed the full legal strength is the least possible force at which the present organization can be maintained, having in view efficiency, discipline, and economy. While the enlistment of this force would add somewhat to the appropriation for pay of the Army, the saving made in other directions would be very considerable, and the efficiency of the Army largely increased.

The history of events during the past year is fully detailed in the reports of division and department commanders and their subordinates, and while all complain more or less of the smallness of their companies

and consequent overwork of their men, it appears that they have been measurably successful in keeping the peace everywhere; in protecting the emigrants; in opening new districts; covering the various routes of travel, and in guarding the Indians on their lawful reservations. The rapid extension of the railroad system west of the Mississippi River, and the great tide of settlers which have flowed in upon new territory, impose on the military an entire change of policy. The maintenance of small posts along wagon and stage routes of travel is no longer necessary. An abandonment of many of these posts, and the concentration of larger forces than has heretofore been practicable at strategic points near the national frontier or at points of railroad intersection, so that detachments may be sent out promptly to districts where they may be needed, is now deemed advisable. This policy will tend to the more thorough drill and discipline of our small Army, by bringing together full regiments and fostering a proper *esprit de corps*. The adoption of this course will necessitate the building of permanent quarters at points selected, which should be of a more enduring character than those heretofore constructed. Under existing laws, permanent buildings cannot be erected without the sanction of Congress, and when sales of military sites and buildings have been authorized, the moneys received have reverted to the Treasury, and could only become available through a new appropriation. It is recommended that provision be made, by a general statute, for the sale of such abandoned military posts and buildings as are found to be unnecessary, and the application of the proceeds to the construction of other posts. While many of the present military posts are of but slight value, in a military view, owing to the changed condition of the country, their occupation is continued at great expense and inconvenience, because affording the only available shelter for troops. Any expenditure upon the buildings at these posts would be a waste of money, yet such expenditures will be imperatively necessary to keep them habitable. The recommendation of the General of the Army that legislation of the character indicated be had is concurred in.

The large number of officers of the line of the Army absent from their regiments requires that some action be had looking to the relief of the service in this respect. The constant demand for the service of small detachments, each of which should be commanded by a commissioned officer, and the various details of officers for necessary service away from their commands, causes a scarcity in the number required for company duties. With a view to lessening this drain to some extent, it is recommended that Congress be requested to so amend the law authorizing the detail of officers from the active list as professors of tactics and military science at certain colleges and universities, as to provide that all such details be made from the retired list of the Army.

#### STATE, WAR, AND NAVY DEPARTMENT BUILDING

The construction of the building for the accommodation of the State, War, and Navy Departments has been confined during the year to the

completion of the east wing, and that of the north wing to the height of the third-story floor, involving the excavation for the building, its foundations and walls. This wing forms one of the portions of the entire structure to be used by the War Department, which is at present crowded, with some of its valuable records, into a part of the front allotted to the Navy Department. The necessities of the government service require that the new building for the War Department shall be pressed to completion as rapidly as possible, and the estimates for continuing its construction are especially recommended.

The Archive Office, Rebellion Record Office, important parts of the Adjutant-General's Office, the Quartermaster's Department, the Commissary Department, the Pay Department, the Medical Department, the Bureau of Military Justice, the Engineer Department, and the Ordnance Department, are now located in buildings outside of the State, War, and Navy Department, and it is apparent that, even when the latter is completed, it will not have area sufficient to accommodate them within its office space.

#### REPORT OF THE ADJUTANT-GENERAL.

The Adjutant-General of the Army points out the importance of placing the uniformed State militia upon the same footing, in respect to its rules and forms, as the regular forces, and to that end he has opened correspondence with the adjutant-generals of the States, indicating a warm desire to be of service to the State forces. It is needless to dwell upon the advantages to be derived from perfect uniformity of regulations for field and camp, and it is to be hoped that these efforts will end in the production of a trained force, so officered and disciplined as to be ready at once to be added to the regular army in time of need. It is not to be forgotten that, during the earlier period of our late civil conflict, time and resources were squandered which might have been husbanded by proper organization of the militia during the prior time of peace.

In this connection, I bring to the attention of Congress the necessity of providing by legislation for the organization, arming, and disciplining the militia, so ably set forth by the Chief of Ordnance.

During the last session of Congress the House of Representatives Committee on the Militia, after mature consideration, reported a bill (H. R. 5638), accompanied by a report (No. 763). The end and aim of this bill is to organize, arm, and discipline only a small portion of the able-bodied men, but to do so perfectly, that the country may at all times be in possession of 200,000 soldiers—citizen soldiers, as distinguished from the Regular Army, but soldiers in fact, in organization, in discipline, in the use of arms, and ready at a moment's call to take the field. To do this thoroughly and effectually requires arms, clothing, equipage, time expended in camp, enthusiasm and encouragement from the top through all the grades to the private soldier at the bottom, but,



first of all, a liberal appropriation by Congress to start and give a healthy impetus to the movement.

The object of this bill is simply stated by the committee in its report: "*That if they (the States) will by their laws provide for and enforce such requirements as Congress deems necessary to secure an efficient militia, Congress will exercise its unquestioned constitutional power, and provide for arming such militia out of the National Treasury.*"

The bill under consideration may not be complete in its provisions, nor perfect in its details, nor sufficiently comprehensive in its scope, but it fixes our *active* volunteer militia within practicable limits, makes it an intelligent living force, that can be utilized and controlled, and brings the protection of a legalized armed body of our citizens within easy reach of every portion of our country.

I have the honor to recommend this subject to your favorable consideration, in hope that the suggestions made will receive your approval, and that Congress will make liberal appropriations to supply all the wants of the *active* militia.

#### LEAVENWORTH MILITARY PRISON.

The affairs of the Leavenworth Military Prison have been capably administered during the past year. The institution has received the personal inspection of the Secretary of War and the board of commissioners.

Up to the close of the fiscal year, 1,818 prisoners have been confined, under sentences imposed by general courts-martial, principally for the crime of desertion. The prisoners have been kept usefully employed, their moral improvement has been cared for, and on leaving the prison they are generally better men and better qualified to maintain themselves. No deaths have occurred among them. Regular inspections are made by a medical officer, and strict sanitary regulations enforced. A library has been provided, 667 volumes having been purchased. During the year 13 new buildings and extensions have been completed; 319 feet of prison-yard wall have been built, making 1,836 feet, in all, completed. The manufactories have turned out 1,915 barrack chairs, 65,000 tent pins, 15 field desks, and all the doors, sashes, &c., used for the buildings; 25,325 pairs of boots, and 31,458 pairs of shoes. Nothing is manufactured except for Army service. The grounds, cultivated by prison labor, have yielded 3,700 bushels of potatoes, 6,000 heads of cabbage, 1,000 bushels of corn, 680 bushels of turnips, 260 bushels of onions, 1,000 bushels of tomatoes, and other eatables in sufficient quantity for the use of the prisoners.

In order to be entirely successful, and to carry out, as far as possible, the original design of making the institution self-sustaining, one important measure of legislation is necessary, which is the authority of Congress to apply the earnings of the prison to its maintenance. A bill for



this purpose was introduced last winter, and it is earnestly recommended that it receive favorable consideration at the approaching session.

#### REPORT OF THE INSPECTOR-GENERAL.

With a few exceptions, every garrisoned military post within the limits of our territory has been carefully inspected during the past year. Critical examinations have been made of the accounts of all officers of the Army who disburse public money, and the reports are submitted to Congress in compliance with the act approved April 20, 1874. Instruction in the different arms of the service has been generally satisfactory, but has been interfered with at some posts, where the garrisons are small, by fatigue and mechanical labor of the troops. The concentration into larger garrisons, and consequent diminution in the number of small garrisoned posts, would give sufficient available men for drills and other military exercises, and conduce to the efficiency and economy of the service.

Highly satisfactory results in small-arm target practice have been obtained, and great interest is manifested by officers and men. The report of Inspector-General Davis gives full account of recent target-firing at Creedmoor.

#### EDUCATION IN THE ARMY.

Col. A. McD. McCook, aide-de-camp, the officer in charge of education in the Army, reports 78 schools in operation, with an aggregate attendance during the year of 2,305 enlisted men and children. The construction of 27 new school-houses has been ordered during the same period, at an average cost of \$1,089 each. Attention is called to the difficulties encountered in procuring the services of competent teachers from the enlisted men of the Army. A teacher, when detailed, receives but thirty-five cents per diem extra pay, and is subject to all military duty, garrison and field, or such duties as may be prescribed by his post commander, and in numerous instances schools have been discontinued temporarily when teachers have been sent to the field with their companies. It is recommended by Colonel McCook that legislation be had, authorizing the enlistment of 150 schoolmasters, with the rank and pay of commissary-sergeants—a suggestion that will probably commend itself to the favorable consideration of Congress.

#### REPORT OF THE JUDGE-ADVOCATE-GENERAL.

The number of general court-martial records received in the Bureau of Military Justice during the year ending October 1, 1880, was 1,543—a decrease of 130 from the receipts of the previous year. The record of cases brought before inferior courts, reviewed and filed in the offices of the judge-advocates of the different military departments during the same period, was 8,233.

The Judge-Advocate-General calls attention to the fact that no provision has ever been made for supplying the judge-advocates of the Army with suitable text-books and books of reference, and recommends that an appropriation be made in that behalf. These officers are frequently called upon, in the course of their duties, to examine the statute laws and rulings of the courts of the States and Territories included in their departments, to advise upon questions of law arising in the administration of the department commands, to prepare military charges, and conduct military prosecutions, as well as occasionally to appear in behalf of the government before civil tribunals; and they should be provided, as are officers of other departments, with facilities for perfecting themselves in their specialties.

Attention is especially invited to his recommendation that the corps of judge-advocates be placed upon the same footing, as to promotion, as are the other staff corps of the Army. Under existing laws, the Bureau of Military Justice consists of one officer, the Judge-Advocate-General, and the corps of judge-advocates of eight officers of equal rank (majors), with a provision that the strength of the corps shall remain at four, when reduced by casualty or resignation to that number. The consolidation of the Bureau of Military Justice and the corps of judge-advocates into one department, upon the same basis as the other staff corps of the Army, would remove an unjust discrimination against deserving officers, and, in my opinion, be to the best interests of the service.

He points out defects in the 72d and 104th Articles of War, and recommends that amendments be made to the 82d article. He also refers to his recommendations, heretofore made, that legislation be had in reference to the military statute of limitations (the 103d Article of War), and submits an argument in support of his view that, in its present form, it applies to the crime of desertion. The interpretation placed upon the statute, in practice, from the time of its enactment in 1806, has been to exclude this offense from its benefits, for the reasons, as urged by those who do not accept the views of the Judge-Advocate-General, that the time a soldier is criminally absent from his command should not be computed—that desertion is a continuing offense, of itself constituting such absence as is contemplated by the exception of the statute. The provisions of this article are nearly identical with those contained in the British mutiny act, which has the additional provision for the trial of an offender within two years of the removal of the impediment caused by his absence, or otherwise. The construction placed upon the article (which was originally the 88th) by the officers charged with its execution, who were contemporaneous with its adoption, followed the construction placed upon the English statute from which it had been derived. In view of the long-continued practice adverse to the opinion of the Judge-Advocate-General, this department has not conceived it proper to adopt the views of the latter. The controversy upon this point which has been engendered has proved, and is proving,

greatly detrimental to the discipline of the service. The question, however, is now in process of final judicial determination. In a recent case brought before the United States district court for the southern district of New York this issue was made up, and the discharge of a soldier ordered by the court. From this decision an appeal has been taken, with the understanding between counsel that it shall be carried to the Supreme Court. In view of this, which is believed to be the most desirable method of settlement of a vexed question, it is recommended that no action be had upon the measure, now before Congress, looking to an amendment of the statute.

The recommendation that gambling be prohibited in the Army, by the enactment of an additional article of war, is renewed by the Judge-Advocate-General.

#### REPORT OF THE QUARTERMASTER-GENERAL.

The Quartermaster-General again recommends the enlistment of post quartermaster-sergeants, for whose services there is great need in the Army, and who, remaining in charge of military supplies and buildings at military posts through all changes of garrison, and whenever temporarily vacated, would preserve a detailed knowledge of the condition of the property and supplies, which are now frequently lost by changes in post quartermasters, who are lieutenants of the line attached to regiments, who move with troops, and leave the property at the posts too often in charge of incompetent persons.

Lieutenants of the line, acting as assistant quartermasters, and responsible for money and property, should be put upon the same footing as officers acting as commissaries in regard to the compensation of \$10 per month allowed the latter. Their duties are as laborious, and their responsibility for property and for money is as great.

The Quartermaster's Department is embarrassed by the exhaustion of the working stock of clothing and equipage. The appropriations of late years have been barely sufficient to purchase a year's issue of these articles. The appropriations not being available until July 1, contracts cannot be completed and executed, after public notice required by law, until August. Then follows the manufacture of the goods, which are not to be found in the quantities required, ready for sale, in the commercial markets. Much of the military clothing and equipage is of pattern and material not used in civil life. Successful bidders change from year to year, and they are obliged in filling contracts to modify the machinery of their factories to suit the peculiar demand; therefore, no considerable supplies of clothing can be ready for transportation to military posts until late in the fall or until winter. The cheaper routes to the northern posts are by water, and these are closed early in the fall. This exhaustive system has heretofore been represented to Congress and to its committees, with recommendation that an appropriation be made adequate to supply a reserve stock; but no measure of relief has yet been passed.

The difficulties and embarrassments continue, and have increased as the stock of old war clothing has gradually become exhausted. This can no longer be relied upon, and this year it is very important that an appropriation be made to lay in a surplus of clothing and equipage sufficient to allow a six months' supply to be kept always in depot as a working stock.

There were 25 wall tents and 1,500 common tents sent to Memphis for relief of the sufferers from yellow fever. Since the abatement of the disease, all tents sent to places infected by this epidemic have been destroyed by fire.

There were 50 hospital tents sold to the National Board of Health; 150 were sent to the governor of Missouri, by order of the War Department, and 16 to a citizen of the State, under the act of 23d of April, 1880, for relief of the victims of the tornado which devastated a part of that State. They have not yet been returned. Their value was \$9,143.38.

Old and condemned clothing of the stock of the late war has been transferred to the National Home for Disabled Volunteers, under the act of 23d January, 1873, to the value of \$53,238.77.

The military prison at Fort Leavenworth is indebted to the Quartermaster's Department for clothing and equipage to the amount of \$8,191.21, and other military stores have been issued to the prison to the value of \$2,001.79; total, \$10,193. The amount charged to the Quartermaster's Department by the prison as value of labor of prisoners in manufacture of clothing and equipage is \$6,599.40; on other accounts, \$3,057.40; total, \$9,656.80. These accounts nearly balance each other, leaving a charge against the prison of \$536.20 only.

New buildings to the number of 150, to cost \$244,000, have been under construction during the year. About 5,000 buildings of all kinds are under the care of the Quartermaster's Department. Repairing them during the year cost \$290,500.

The buildings at Fort Snelling for headquarters of the Department of Dakota have made satisfactory progress. It has, since the termination of the fiscal year, been determined to move the headquarters of the Department of the Platte back to the city of Omaha. The great cost of erecting the many new buildings reported to be necessary at these headquarters, and the deliberate opinions of the division and department commanders that the location was not so convenient or economical for the transaction of business as if in the city, determined the Secretary of War to adopt this course, under the provisions of the act of June 23, 1879. The expenditure of the large sum necessary to properly provide for a headquarters would, in my judgment, be unwise, especially in view of the small reservation possessed by the government.

The appropriation for hospital construction has been applied to 100 different military hospitals, repairing some and building others.

Title has been acquired to the two military reserves on which stand

Ringgold Barracks and Fort McIntosh, both on the Rio Grande. Nine military reserves have been declared by the President during the year, viz: At Cheyenne Depot, Wyoming Territory; Forts Robinson, Nebraska; Sanders, Wyoming Territory; Cameron, Utah Territory; Niobrara, Nebraska; McKinney, Wyoming Territory; Assinniboine, Montana Territory; Cœur d'Alene, Idaho Territory, and Sidney, Nebraska.

Under the provisions of the act of July 4, 1864, for payment of quartermaster's stores taken by the Army in the loyal States, the period during which such claims could be filed expired January 1, 1880. There were in the Quartermaster-General's Office, on June 30, 1879, 11,649 claims of this character, amounting to \$5,523,294; and 12,757 were filed in the succeeding six months for \$7,527,051.56. On the 1st of January, 1880, the amount of claims on file undisposed of was \$13,050,345.56.

During the year 1,515 such claims, amounting to \$1,052,885.32, were finally acted upon. Of these, 594 for \$314,464.89 were reported to the Third Auditor, with recommendation for settlement at about one-half the amount claimed, \$157,650.70; 921 claims, for \$738,420.16, were rejected. Under the law of 1864 there had been filed in the Quartermaster-General's Office, after the passage of the law and before the statute of limitation went into effect, 53,505 claims for \$38,084,066.55; 30,614 of them have been decided by the Quartermaster-General, amounting to \$26,086,606.34. Of these, 10,499 have been recommended for settlement, at \$4,301,583.65; the rest were rejected; 28,891 remain not finally disposed of, which call for \$11,997,460.21. About one-half the claims filed originated in the State of Tennessee.

Attention is again invited to the danger of destruction of most valuable records from the insecure building in which the Quartermaster-General's Office is situated, and where it apparently must remain for some years to come. Claims, accompanied by original evidence, to the amount of \$19,000,000 are on file in that building, besides many other records valuable to the government as the means of defeating unjust claims, and to the people as containing the evidence on which very large payments are to be made in settlement, and are certainly in danger from fire. The recommendation that an appropriation of \$200,000 be made for purchasing a site and erection of a fire-proof store-house or hall of records convenient to the Executive Departments, and for the use of all of them, is renewed; and a plan showing how the needed protection can be obtained for so small a sum is submitted by the Quartermaster-General.

The Quartermaster's Department moved during the year 55,468 persons, 16,094 beasts, and 126,218 tons of military supplies and material, at a cost of \$1,937,318.56.

The Pacific Railroads—Union, Central, Kansas and Sioux City and Pacific—have, since their completion, earned in military transportation \$10,603,473.32. During the past year their earnings amounted to \$1,116,108.07, and accounts of these roads to the amount of \$625,682.32 are in course of settlement.



An appropriation is asked to continue to pay the land-grant railroads 50 per cent. of their net earnings, the appropriation of \$300,000, made for that purpose on 3d March, 1879, having been expended.

Some of the railroads which purchased railroad supplies from the War Department at the close of the war continue in default. The State of Tennessee, largely indebted on this account, has not paid the sum for which its officers, by special authority of State law, executed bonds binding the State to such payments.

In the Quartermaster-General's report will be found detailed statistics of the number of animals purchased for cavalry and artillery and Army transportation, the amounts of forage, fuel, and other supplies purchased and consumed.

There are 80 national cemeteries, containing at end of the year the graves of 170,997 known and 147,495 unknown persons. Three new superintendents' lodges have been placed under construction. The wall of Chattanooga Cemetery has been rebuilt; the stone gates there and at Vicksburg have been completed. The road from Vicksburg to the cemetery, for which Congress made special appropriation, is in progress.

The principal and frequently the only available communication between the capital and the great cemetery at Arlington, is by a road always bad and sometimes impracticable. It is strongly recommended that an appropriation be granted to put it and its bridges in good condition. The propriety of making this cemetery, containing 208 acres, a public cemetery for the interment of all officers of the government, members of Congress, &c., dying at the capital, whose friends do not prefer a private cemetery for their interment, is suggested by the Quartermaster-General.

#### REPORT OF THE COMMISSARY-GENERAL OF SUBSISTENCE.

Subsistence supplies for the year have been purchased as near the points of consumption as practicable. This has been done by advertising for proposals, under section 3709, Revised Statutes, when time would permit that method of purchase, by handbills posted in public places, and by circulars to principal dealers. In order to issue the best quality of supplies at the most reasonable prices, it is a rule of the department to deal, as far as practicable, with original producers, packers, manufacturers, and importers. Where any of these hold a monopoly in any line of goods needed by the government, advertising is a useless expense. It is suggested that section 3709 be amended by exempting the Subsistence Department from that portion of the section requiring advertising for proposals when the public exigencies do not demand immediate delivery, in all cases where the supplies needed are known to be produced only by a single manufacturer, or are sold by a single business house, or are desired in such small quantities as not to warrant the expense of advertising for proposals.



I concur in the following recommendations of the Commissary-General of Subsistence: That the Subsistence Department may be authorized by law to sell supplies to officers and enlisted men, under sections 1144 and 1145, at the last invoice price of the articles, without adding the charge for "transportation, wastage, or other incidental charges," required by the provisos in the last two acts making appropriations for the subsistence of the Army; and the passage of the law, now pending in the House of Representatives (H. R. No. 6179), which authorizes the sale of 24 ounces of tobacco per month to such enlisted men as may desire that amount. And touching other legislation now pending looking to the regulation of the method of purchasing tobacco for the Army (H. R. No. 4395), it is the opinion of the Commissary-General of Subsistence that, as there is no greater reason for a special law upon the subject of purchasing tobacco than there is for a special law for the purchase of flour or of pork, no legislation upon the subject is necessary.

The value of subsistence stores issued to Indians, and turned over to the Indian Bureau during the fiscal year, was \$23,661.40 (including the cost of transportation). Of this amount \$14,042.15 has been transferred to the Subsistence Department by the Indian Bureau, as reimbursement; \$1,509.91 is still due from that bureau, and the remainder is for issue made to Indian prisoners of war, for which no reimbursement is claimed.

The Commissary-General of Subsistence recommends the passage of a law to authorize the Secretary of War to appoint from the grade of lieutenant, on the recommendation of the Commissary-General of Subsistence, as many "assistant commissaries of subsistence" as the service may require, not exceeding fifty, at the pay of \$10 per month in addition to the pay of their rank, and to hold their appointments until canceled by order of the Secretary of War, or by their promotion to the grade of captain; and that where there is no assistant commissary at any garrisoned post, or with any command, the commanding officer thereof may detail an officer to act as assistant commissary, who, if a lieutenant, shall be entitled, while performing the duty, to the pay of assistant commissary; all such details to be forthwith reported to the Commissary-General of Subsistence. This I submit for the consideration of Congress.

He also recommends that it be provided by law, when it is found that any commissary-sergeant is not suited for the position to which he has been appointed, but capable of performing duty as sergeant of the line, he may be reduced to the ranks and assigned to the companies of the line, upon the recommendation of the Commissary-General of Subsistence.

He proposes that Army cooks and bakers should be enlisted, and cooking schools be established, and recommends an appropriation of \$1,000 for the purpose of printing, for distribution to the Army and to the State militia, a further edition of the "Manual of Army Cooks,"

limited already in its circulation, and suggests that at the annual encampments of State militia the militiamen should accustom themselves to the use of the Army ration, the importance of which will be appreciated by those who have had experience with volunteers during their first service in the field; that at such encampments this may be done by the assistance and under the supervision of experts from the Army cooking schools, should they be established as he recommends.

He requests a reorganization and temporary increase of the clerical and other force of his office, the permanent force to agree with the number and grades allowed in 1874, 1875, and 1876.

The progress in the settlement of the various classes of claims on hand in his office, and filed during the fiscal year, is reported in detail. He suggests that, if his office is to continue the examination of war claims, under the act of July 4, 1864, now on file (the further filing of which claims is now barred by the 3d section act March 3, 1879), some statutory limitation should be established by operation of which the right of claimants to a rehearing of their cases, after being formally considered and disallowed, shall cease and be determined, there being no limitation at present upon the right of claimants to press upon the office, upon new papers filed or upon the probative force of old ones, the reconsideration of claims that have been unfavorably decided by himself or his predecessors.

He renews his recommendation, heretofore made, that the adjudication of this class of claims be transferred to some other tribunal.

#### REPORT OF THE SURGEON-GENERAL.

The report of the Surgeon-General shows a gratifying state of health throughout the Army.

The amount expended during the fiscal year for medical and hospital supplies alone was \$120,902.65, while the cost of medical and hospital supplies actually issued during the year was \$175,684.42. The difference was made up from the surplus stock of supplies left over from the war, which stock is now comparatively exhausted. It is recommended by the Surgeon-General that an appropriation of \$250,000 be made for the next fiscal year for the purchase of medical and hospital supplies, for expenses of purveying depots, pay of employés, pay of private physicians and nurses in emergencies at posts and stations for which no other provision is made, and for other miscellaneous expenses of that department.

The force of clerks in the record and pension division of the Surgeon-General's Office having been increased, it has been enabled to rapidly reduce the accumulated work, due to the operation of the act of Congress approved January 25, 1879, granting arrears of pensions.

The number of new official demands for information as to cause of death in cases of deceased soldiers, and the hospital records of invalids, proved very much larger than during previous years; and it will be

necessary, in order that the office shall not again fall behindhand, that the present clerical force be continued unchanged during the next fiscal year. The records of this division, however, are greatly worn and dilapidated. The volumes which contain medical records of the war of the rebellion are hospital registers, which were in no good condition when turned over to the office at the termination of the war. About 4,500 volumes of these registers are on file, which must be constantly referred to by the searchers, to obtain the hospital history of deceased and disabled soldiers who apply for pensions, and by continual handling they are worn out. Between three and four hundred of them are so tattered that they should be recopied at once, or their precious contents will be lost forever. Provision should be made that the whole number be copied in an authentic manner, and I recommend that an appropriation be made for the employment of twenty-five clerks for this purpose. A larger number would embarrass the current work, by removing too many books from the office at once; but the number estimated should be provided for this purpose for some years to come.

All available space in the building on Tenth street, in which this work is done, is now taken up, so that the work of recopying could not be done there. It will be necessary to provide quarters for this additional force. The present building, known as the Army Medical Museum, is now in an overcrowded and unsafe condition. It is occupied by the Record and Pension Division, the Division of Surgical Records, and the library of the Surgeon-General's Office, as well as by the museum. The continued growth of valuable collections renders the space available for their preservation quite inadequate for display and storage. The collection and records are continually exposed to danger of destruction by fire. The building is surrounded by, and in immediate contact with, inflammable houses and sheds, and private property not under the control of the department. The Surgeon-General earnestly calls attention to this subject, and requests an appropriation for a new fire-proof edifice adequate for the present needs and reasonable future expansion of the collection now stored in the present unsafe building. Such a structure will cost not to exceed \$250,000.

#### PAYMASTER-GENERAL'S REPORT.

The Paymaster-General recommends that the laws in reference to leaves of absence of officers of the Army be repealed, as he regards them as harsh and unjust in their operation, and very unequal. A very large portion of the officers are stationed at Army posts in the West, and when a leave is obtained, the whole or nearly the whole of the thirty days is often necessarily consumed in travel to Atlantic cities, where most of the officers desire to go, and in returning to their posts. The extent to which leave should be granted may be safely left to the action and recommendation of the division and department

commanders and the General of the Army, and the decision of the Secretary of War.

The law now limits the number of paymasters' clerks to fifty-four. It has often happened that in consequence of special duties being required of a paymaster—the payment of bounties, &c.—one clerk has proved insufficient for the performance of the duty. It is therefore recommended that the number be increased by law, not to exceed sixty; the additional or extra clerks to be employed under the special authority of the Secretary of War in each case.

The Paymaster-General calls attention to the inadequate compensation now allowed these clerks, who have to perform important and responsible duties, requiring an intimate knowledge of figures and business capacity, and often necessitating long and toilsome journeys and exposure to danger; and he expresses the hope that, at the coming session, some more liberal provision will be made for them. It is hoped that Congress will give this subject favorable consideration, as it is believed no class of public servants, occupying positions involving so great responsibility, are so poorly compensated as are these.

It is recommended that Congress be requested to render available the unexpended balances of the appropriations made for the payment of bounty to colored soldiers or their heirs—a balance unexpended June 30, 1880, of \$5,595.02.

#### REPORT OF THE CHIEF OF ENGINEERS.

The report of the Chief of Engineers shows that our fortifications are not in a condition for the defense of important cities and depots of military and naval supplies, in case of war with any of the maritime powers. These powers have been rapidly and steadily increasing their means for offensive warfare, while the United States has been for years retrograding in its means for carrying on such a war. This appears from the fact that the small annual appropriations, limited by law to the protection, preservation, and repair of our sea-coast defenses (which are more exposed than any of our public works, except light-houses, to the destructive action of the elements), have proved inadequate even for these purposes, many essential works of repair remaining unexecuted for want of funds.

From a personal inspection of many of the fortifications, referred to by the Chief of Engineers, I am able to emphasize his recommendations, and beg to state that their incomplete and defenseless condition is discreditable to the country.

Judging from the history of all other nations, and the experience of our own, the United States will, notwithstanding our traditional pacific policy, find itself, sooner or later, at war with a maritime power. When that war comes, it will come suddenly. There will be no time after its declaration to construct defenses, either fixed or floating. Other nations have been for some years, and are now, constructing fast war steamers

of enormous size, encased in iron armor up to two feet in thickness, and armed with rifled guns weighing up to 100 tons, carrying shot of a ton's weight, fired with little short of a quarter of a ton of powder. It is feared that the country does not appreciate the fact that, after the declaration of war, a few days, or even hours, might bring these great engines of destruction to our coasts, it may be to New York, or Boston, or Portland, or Baltimore, or New Orleans, or San Francisco, or to any point the enemy may select. No one can estimate the damage which may follow.

The report of the Chief of Engineers, to which I invite especial attention in respect of our national defenses, shows that, in immediate defense of our sea-coast, reliance must be had either on fortifications and obstructions (torpedoes), or on the Navy; that it is and has been the practice of all nations—and the traditional policy of our own country has, from the necessity of the case, conformed to it—to rely on fortifications and obstructions elaborated in time of peace; that the worst possible attitude in case of foreign war is a strictly defensive one—one of waiting to receive the blows of an enemy, leaving him free to select the times and the places; that, while our rich cities and depots should be defended by impregnable fortifications and obstructions, our Navy should be left free to attack the weak places on the coasts of the enemy's country and possessions, to pursue him on the ocean, to protect our commerce afloat.

Modern wars, then, coming on suddenly, and fortifications being necessary, it must be remembered that they—even earthworks—cannot be built in a day.

Our casemated works must be covered by thick iron armor, specially made for the purpose, and turned out but very slowly from even the best-appointed of our manufactories; our earthworks must have very greatly increased thickness of parapet, compacted by time; our magazines of ammunition must have much thicker masonry arches and earth-coverings than formerly; our torpedo lines must have subterranean masonry galleries for conducting the wires to the deep water of our harbor mouths from the chambers containing the electrical apparatus by which the lines are to be fired, and these galleries and chambers must be protected, beyond all peradventure, from the enemy's shot and shell; our masonry gun-platforms, composed of great masses, must be capable not only of sustaining the immense weights, but of resisting the enormous strains they will be subjected to by the recoil of 80 to 100 ton guns; and furthermore, the masonry of walls and magazine arches and gun-platforms, to afford an effectual resistance, must be indurated by time.

The vast agricultural, mining, and manufacturing interests of the interior must see to it that the *termini* of our great lines of railway and the mouths of our great rivers and estuaries are left free, under any and all circumstances, for the exit of our commerce, and the rich cities of the sea-board must look to the proper protection by fortifications, for, if they are not so protected, an enemy's shells may kindle greater fires



than that which occurred at Boston a few years ago, and destroyed in a few hours property valued at eighty-six millions of dollars.

It is earnestly to be hoped that what the Chief of Engineers has stated in respect to our sea-coast defenses will impress Congress and the country with the fact that, while other nations have been increasing their means for carrying on offensive warfare and attacking maritime cities, we have been dormant in preparation for defense; that little or nothing has been done towards strengthening and finishing our casemated works since our late civil war, during which the great guns of modern warfare and the heavy armor of modern fortifications and ships came into use among the nations, and that our earthworks were left, by a sudden failure of appropriations some years since, in all stages of incompleteness, and are now being rapidly destroyed by the elements.

The Engineer School of Application, at Willets Point, New York, has been engaged in the theory and practice of a system of torpedoes which is not inferior, it is believed, to that of any nation. By a recent order, the utility of this school will be increased by the detail, to commence in January next, of lieutenants of artillery for instruction in torpedo service.

Fortifications and torpedoes have become the twin defenses of maritime countries. The latter will hold fast-running war steamers under the fire of the former; and the welfare of the country requires that our torpedo system should be fostered and generously appropriated for. Not only the torpedoes, but the electrical apparatus, must be provided and in store in our forts, and the subterranean galleries for conducting the wires to deep water, and the bomb-proof covers for the apparatus, as has already been stated, must be built in secure positions, and in the strongest manner, before the approach of war. I commend to the favorable attention of Congress the remarks of the Board of Engineers, which accompany the report of the Chief of Engineers, in respect of the wants of our torpedo system and the importance of increasing the Battalion of Engineers to 752 men, its legal organization, successive reductions of the Army having dwarfed the number to 200 men.

The works of river and harbor improvements and examinations and surveys provided for by act of March 3, 1879, and previous acts, were carried on during the fiscal year with satisfactory progress. The amount available therefor July 1, 1879, was \$10,772,176; the amount expended to June 30, 1880, \$6,174,221, leaving an available balance of \$4,597,955 to be expended during the present fiscal year, to which are to be added the appropriations by the river and harbor act of June 14, 1880, amounting to \$8,951,500.

The act of June 14, 1880, makes provision for 343 works of improvement, in sums varying from \$500 to \$300,000, and for surveys and examinations with a view to improvement of 144 localities.

The execution of all works for which plans and estimates had been previously approved was at once proceeded with. In the case of new works, examinations, investigations, and surveys have been undertaken



with a view to the perfection of plans of improvement proper to be made. It is expected that reports of the results of the examinations and surveys provided for in the above act will be received in time for transmission to Congress in the early part of the ensuing session.

Detailed information in regard to each specified river and harbor improvement may be found in the report of the Chief of Engineers.

In order to avoid the necessity which sometimes arises for constituting special boards of engineers for the consideration of works of river and harbor improvements, the permanent board of engineers for fortifications was reorganized so as to embrace in its duties the consideration or revision of such plans for works of river and harbor improvement as may be required.

Preliminary arrangements have been in progress during the year, under the direction and supervision of the inventor, for making the practical test of the flume invented by Mr. M. J. Adams for increasing the depth of water in the Mississippi, for which \$20,000 were set apart by act of March 3, 1879, to be used by the Secretary of War at his discretion for that purpose.

The river and harbor act of March 3, 1879, appropriated \$150,000 to be expended by the Secretary of War in the commencement of the construction of a breakwater and harbor of refuge at such point on the Pacific coast, between the Straits of Fuca and San Francisco, Cal., as may, in the opinion of a majority of the board of engineers for the Pacific coast, be most suitable, the interests of commerce, local and general, being considered. The subject is now under consideration by the board. No final report has been made.

The report of a board of engineer officers, constituted in compliance with requirements of joint resolution of Congress approved June 30, 1879, relating to a bridge across Detroit River at or near Detroit, was transmitted to the Senate December 6, 1879.

On the survey of the northern and northwestern lakes, the triangulation from Lake Michigan to Lake Erie, and from Chicago to Parkersburg, Ill., has been completed. A new chart of Lake Erie, and coast charts Nos. 1, 5, and 6 of Lake Erie have been finished.

In the survey of the territory of the United States west of the 100th meridian, work has been confined entirely to reduction of field notes and construction of maps. Volume 7 of quarto reports has been published.

Eight officers of the Corps of Engineers have been on duty at the headquarters of the military divisions and departments, and have been engaged during the year in preparing such maps and making such surveys as are required by their respective commanding officers. The maps prepared by these division and department engineers were of great value to the War Department and to the Army in the movement of troops, the establishment of posts for controlling the Indian tribes and protecting settlers. It is especially desirable that the un-

explored areas, which in future campaigns are liable to be traversed by troops or by hostile Indians, should be surveyed, plotted, and added to our campaign maps. If the small appropriation asked for these surveys is granted by Congress much can be accomplished at little expense in improving our maps of the territory west of the Mississippi.

#### REPORT OF THE CHIEF OF ORDNANCE.

The report of the Chief of Ordnance points out the duties of the Ordnance Department in respect to providing arms, ordnance, and ordnance stores for sea-coast defense and for the Regular Army, the militia, the Marine Corps, and for other departments of the government, when necessary to protect public money and property. Its further province is to determine the most efficient and effective war material for the service, in which respect the practical experience, study, and experiment of officers of this department have led to a most gratifying success in the selection and perfection of our arms and ammunition.

The Chief of Ordnance reports satisfactory prosecution of the construction of workshops at Rock Island Arsenal; submits estimates for a new machine shop at the Benicia Arsenal, California, and estimates for buildings and improvements at the Sandy Hook proving ground. I join with him in his views as to the necessity for these improvements, and recommend that adequate appropriation be made for them.

He reports the successful operation of the United States testing machine at the Watertown Arsenal, adding that this machine is considered the most perfect testing machine in the world; equally able to test a single bar and the largest column or specimens by either tension or compression with any load desired, from one to eight hundred thousand pounds, being of any length from one inch to thirty feet. Its determinations are of great value to the departments of the government and to the scientific and industrial interests of the whole country. The memorial of its inventor, asking additional compensation and reimbursement, is commended to the favorable consideration of Congress.

The views of the Chief of Ordnance upon the subject of organizing, arming, and equipping the militia are given elsewhere in this report.

Much interest has been felt throughout the Army upon the subject of target practice, awakened in a great measure by the rifle contests at Creedmoor, in which teams from the various military divisions have been allowed to participate, and this department has endeavored to assist by every proper means in extending and developing the good feeling between the volunteer militia and the regular forces which arises from bringing them together in these friendly contests. In the international military match, September 16, 1880, the team from the Military Division of the Missouri bore off the prize in that contest for the Hilton shield.

In the matter of the armament of fortifications the Chief of Ordnance looks forward to a more liberal policy than this subject has heretofore received. Congress at its last session provided for the manufacture of

four improved breech-loading twelve-inch rifled guns, and steps were taken to have them at once made upon the system selected by the Ordnance Department, and which has been successfully tested at the Sandy Hook proving ground. The first of these guns is expected to be completed and delivered in sixteen, the second in eighteen, the third in twenty, and the fourth in twenty-two months, or about two years after the passage of the appropriation act. In the manufacture of these guns the plant is very costly, and manufacturers do not feel justified in running the risk of making preparation of plant for the increased size of modern ordnance unless they can be assured as to the certainty of annual appropriations for their manufacture; and the Chief of Ordnance strongly urges that Congress be recommended to increase the appropriation of last year and make it a permanent one, to enable our foundries to perfect their establishments so as to do the largest amount of work in the shortest time. The simple statement of the time required to complete these guns should, it is conceived, impress upon Congress the absolute necessity for making provision for expediting work of this character.

The calls for magazine guns for the use of cavalry, and the constant improvement by inventors in these arms, induces the recommendation that an appropriation be made for the purpose of further study and actual trial-test in the field of the best magazine systems.

The Chief of Ordnance also points out the necessity of providing a reserve supply of small-arms, reporting that the number on hand is well-nigh exhausted. It is to be hoped that Congress will provide sufficient appropriation to enable the department to manufacture a reserve supply during each year, so that the country may be prepared for emergencies, and an appropriation of \$500,000 is thought to be a reasonable one, and should be appropriated. Our armories and arsenals should be stocked with war material, our fortresses well armed, and our militia well organized, armed, and equipped, so that in case of war we may be able, together with our small force of regular troops, to create an efficient army and put it into the field.

#### REPORT OF THE CHIEF SIGNAL OFFICER OF THE ARMY.

The Chief Signal Officer reports that the established course of drill and instruction in military signaling and telegraphy, meteorology, and the Signal Service duties at stations of observation and report, together with the military drills, has continued at the School of Instruction and Practice at Fort Whipple, Virginia.

For the benefit of agriculture and commercial interests one hundred and ninety-six stations have been maintained during the year, from which reports are deemed necessary to enable proper warnings to be given of the approach and force of storms, and of other meteoric changes. Twenty-eight stations of a second class, hitherto described as "sunset stations," at which a single observation is taken daily, at the

time of sunset, by citizens employed for this purpose, have been continued in operation.

The daily exchange of telegraphic reports with the chief meteorological office of the Dominion of Canada has been continued, and warnings have been regularly sent to enable signals to be displayed at the ports of the Dominion at times of threatened danger.

The series of daily telegraphic reports from stations in the West Indies, extending from Cuba by Jamaica to Barbadoes and the Windward Islands, has been continued during the seasons of especial danger. These reports are, at times, of importance for the preannouncement of cyclones approaching the Gulf of Mexico and threatening the coast of the United States.

The display of cautionary day and night signals, by flags and lights, upon the lakes and great ports of the United States upon the Atlantic and Gulf coasts, has been made systematically on occasions of supposed especial danger at one hundred and two different sea and lake ports and cities. Of the total number of cautionary signals thus displayed, eighty-three and four-tenths per cent. have afterwards been reported as justified. In the cases reported as failures of justification, the wind did not attain, at the place of display, a violence supporting it. No great storm has swept over any considerable number of the ports of the United States without preannouncement.

A "weather case, or farmer's weather indicator," an instrument arranged to exhibit together, on a simple plan, the meteorological indications of several instruments, and in such way that they can be easily noted by any one, is in preparation for general issue. This instrument is intended to be used in connection with the farmer's bulletin. It will, it is hoped, enable the people to determine in advance something as to the character of the coming weather from local indications alone, when added means of information cannot be reached or may fail.

The river reports, giving the average depth of water of the different great rivers of the interior, and notice of dangerous rises for the benefit of river commerce and the population in the vicinity, have been regularly made, telegraphed, "bulletined" in frames, and published by the press at the different river ports and cities.

The series of canal reports announcing temperatures were issued, during the season of closing navigation at the commencement of the last winter, for the uses of canal commerce in the several States, and the interests depending thereon.

Last year, in November, for the first time, special frost indications were ordered to be forecasted and telegraphed to New Orleans for the benefit of the sugar interests of Louisiana. Hereafter special attention will be given to the early forecasting of anticipated frosts for the sugar regions, from the 1st of October to the 1st of February of each year. The warnings will be given as early as they can be with reasonable safety; if possible, three days in advance. This information will be

furnished to interested parties and to the press of New Orleans, and sent by telegraph from that city to any point desired.

In pursuance of the acts of Congress authorizing the construction and operation of telegraphic lines in the interior and upon the frontier, for connecting military posts and stations, and for the protection of the population from Indian and other depredations, officers and enlisted men of the Signal Corps have been continued upon these duties. Important extensions have been made during the year to the lines in Texas, the Indian Territory, and in Washington, Montana, and Dakota Territories. The work of construction has been in large part done by working parties furnished by the active co-operation of department commanders.

The Chief Signal Officer recommends that there be just provision, by legislation, for the permanent employment and grades of the officers of the corps.

#### THE MILITARY ACADEMY.

The annual report of the board of visitors to the Military Academy at West Point is herewith transmitted.

The board recommend, as did their predecessors, an extension of the cadet barracks, many of the rooms at present being occupied by three cadets, which overcrowds them, and is likely to interfere with health and a proper attention to their studies.

Plans have been drawn and estimates made for extending the west wing of the barracks, so as to add thirty-two rooms, and it is recommended that the sum necessary for the purpose be appropriated.

The board further recommend an appropriation of \$21,617.84 to complete the new hospital, and \$2,400 for the construction of a suitable bath-house. The river where the cadets now bathe is exposed and exceedingly dangerous, several of them having been drowned.

The board of visitors express an opinion that the standard of acquirements, as a condition precedent to admission to the Academy, imposes upon the corps of instructors duties which may as well be performed by the teachers in the common schools throughout the land, and state that, as a consequence of this low standard, much valuable time is consumed in purely elementary instruction, at enormous expense. It is recommended by the board that the present standard of admission be materially raised.

It is suggested that the adoption of this view, in practice, would serve to restrict the benefits of the Academy to youths who have enjoyed the privileges of instruction as gratuitously provided in the cities and larger towns, and those whose parents can afford to specially prepare them, and that an extension of the present term to five years, the first year to be devoted to thorough elementary instruction, would perhaps be a wiser course to pursue; and surely you will agree with me in the opinion, that in this great national school, open to the sons of every



citizen of the country, of all conditions of life, such facilities should be afforded as will enable the humblest—those whose circumstances have prevented from receiving early education—to partake of its benefits.

I have refrained from commenting upon the unfortunate agitation which flowed from an alleged assault upon a colored cadet at the Academy in April last, for the reason that, in some of its legal aspects, the subject is still under consideration.

The right of way across the property belonging to the government at West Point, New York, granted by an act of Congress of December 14, 1867, to a railway, had remained for several years unenjoyed, when, in June last, the grantee proposed to resume possession. In considering the proposition, with a view to protecting public interests, it was apprehended by the Academy authorities that the location, construction, and operation of the railway would seriously interfere with the use of instruments and the quiet occupation of the West Point observatory. The railway company, upon notification of this objection, proposed to construct, at their own expense, upon another site, secure from such interference, a new observatory, to cost about \$50,000, and to forthwith furnish security in that amount that their undertaking would be satisfactorily accomplished. This proposition was accepted, in view of certain terms in the grant, namely, that the right should be enjoyed "under such regulations as shall be approved by the Secretary of War." (15 Stat., p. 33.) The contract requires that, when the new observatory is completed, it shall be offered to this department for acceptance on behalf of the government. The location is still upon the land owned by the United States.

#### MONUMENTS AT COWPENS, SOUTH CAROLINA, AND YORKTOWN, VIRGINIA.

By the joint resolution of Congress approved May 26, 1880, the duty devolved upon me to cause to be made a bronze statue of General Daniel Morgan, the commander of the American forces at the battle of Cowpens, South Carolina, and to cause the same to be delivered, through the governor of that State, to the Cowpens Centennial Committee, in time to be placed in position upon the memorial column before the 17th day of January next, the centennial anniversary of the battle. With your approval, Mr. J. Q. A. Ward, of New York, was selected as the artist to execute the statue, and a contract was entered into with him for the sum named in the law, and approved by me on the 18th of June, 1880. Since that time the artist has been diligently at work upon the model, and on the 20th of October he reported the design so far completed that he would be able to cast it in plaster in a few days. There would seem to be no question but that he will be able to execute and deliver the statue in the time contemplated by the law.

The act approved June 7, 1880, provided for carrying into effect the resolution of Congress adopted on the 29th of October, 1781, "that there



should be caused to be erected at York, in Virginia, a marble column commemorative of the surrender of Earl Cornwallis," and appropriated the sum of one hundred thousand dollars, to be expended under the direction of the Secretary of War, in erecting, at Yorktown, in Virginia, the monument referred to in said resolution, with the proviso that the material used might be such as the Secretary should deem most suitable and desirable. The act further provided for the appointment of a commission of three persons to recommend a suitable design for said monument, and to perform other duties to carry out the intentions expressed in the original resolution. Richard M. Hunt, of New York, Henry Van Brunt, of Boston, and J. Q. A. Ward, of New York, were the gentlemen selected by me to be appointed. The two former were architects, and the latter a sculptor of recognized ability, and their letter of acceptance was written by them July 31, 1880. Up to date no report has been made by them of their action in the premises, but the communication to them upon the subject required that the design should be finished and ready to be submitted to the select committee of Senators and members of the House of Representatives, as provided in the act, by the 15th of December, 1880.

#### PUBLICATION OF THE OFFICIAL RECORDS OF THE WAR OF THE REBELLION.

The preparation of these records, for publication, is steadily progressing, and important additions have been made, by voluntary contributions, both to the Union and Confederate archives. The first two volumes of reports are in the hands of the Public Printer, and others will follow till the appropriation for printing and binding is exhausted. The printing proceeds as rapidly as the proofs can be properly revised. The plan of publication is described at length in Colonel Scott's report, to which attention is invited.

#### ASSISTANT SECRETARY OF WAR.

The varied character of the questions constantly arising in the administration of this department, the large number of employés engaged in its labors, and the desirability of having an officer with whom the Secretary could take counsel and to whom could be confided power to act in his place when he should be absent from the seat of government, impel me to recommend that provision be made by law for the appointment of an Assistant Secretary of War.

ALEX. RAMSEY,  
*Secretary of War.*

# PAPERS

ACCOMPANYING

## THE REPORT OF THE SECRETARY OF WAR.

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### REPORT OF THE GENERAL OF THE ARMY.

HEADQUARTERS OF THE ARMY,  
*Washington, D. C., November 10, 1880.*

SIR: I have the honor to submit the annual reports of the Adjutant-General of the Army, of the Inspector-General, and of the several commanding generals of the divisions and departments; of the Military Academy at West Point, the Artillery School at Fort Monroe, with such other subordinate reports as seem necessary to show the present strength and condition of the Army, and to give the history of events during the past year. These are all so full and complete that nothing is needed on my part except to epitomize the matters given more at length in the reports themselves.

The divisions and departments into which the territory of the United States is divided remain the same as last year, and no changes have occurred in the commanding generals thereof. The distribution of the troops is given with great precision in the tabular statements C, D, E, and F of the appendix to the report of the Adjutant General herewith.

The organization of the Army—Table A—provides for 11 general officers, 555 officers and 1,286 enlisted men for the staff; 1,989 officers and 24,214 enlisted men for the line. Of these latter 694 are detailed as clerks, or recruits unassigned to regiments, reducing the possible force for military service to 23,520 enlisted men.

The actual force must at all times be kept below that figure, as exhibited by the tabular statement herewith, marked "B," and there must always be allowed for "sick," "detached service," and other unavoidable causes, at least ten per cent., reducing the available force to about 20,000 enlisted men. I therefore agree with General Sheridan, that the Army is too small in enlisted men to fulfill the heavy duties now imposed on it, and is overworked. I therefore renew my recommendation of last year that Congress be asked to give twenty-five thousand enlisted men, *specifically*, to the troops of the line of the Army, and to make separate provision for the detachments of "ordnance men," "engineer battalion," "hospital stewards," commissary-sergeants," "West Point detachments," detailed clerks, &c., in the same manner as has already been done for the Signal Corps. In this connection I will venture to call your attention to the fact that the Revised Statutes, edition of 1878, section 1115, Chap. I, defining the organization of the Army, limits its strength to "not more than 30,000 enlisted men," but subsequent appropriation bills, by *provisos*, have limited expenditures to 25,000 enlisted men. Still the legal strength is 30,000 enlisted men, and that number is the least possible at which we can maintain the present organization of forty regiments in anything like good order, discipline and economy, and I infer this end can be reached by simply omitting the "proviso" in the next appropriation bill.

The combatant force remains to-day the same that it was last year, composed of ten regiments of cavalry, five of artillery, and twenty-five of infantry, but under the "proviso" limit, (25,000 enlisted men), the companies are too small for proper discipline, or for economical service, and I am convinced that the proposed increase of enlisted men will double the efficiency of the Army, and hardly be felt in the annual expenditure.

In this connection I submit the report of Inspector-General Marcy, whose long service and experience entitle his recommendations to great respect. If any neglect has arisen in the artillery arm of service, it has resulted from the impossibility of keeping up the five mounted batteries to a proper standard for want of men, and by reason of the fact that ever since the civil war there has been a disinclination on the part of Congress to provide enough modern guns for our sea-coast forts. The prosperous times and easy financial condition of the Treasury may now enable Congress to provide suitable armaments for the forts which guard the chief harbors of the country.

For the history of events during the past year I invite your attention to the careful reports of Generals Sheridan, Hancock, and McDowell, and the subordinate reports of department and district commanders herewith. All complain more or less of the smallness of their companies and consequent overwork of their men; but enough is given to satisfy me that they have been successful in keeping the peace everywhere; in protecting the emigrant; in opening new districts; covering the various routes of travel, and in guarding the Indians on their lawful reservations. The progress of settlement west of the Mississippi in the past fifteen years has been simply prodigious. Hardly a mountain but has been "prospected" for gold and silver, and now prosperous farms and cattle ranches exist where ten years ago no man could venture. This is largely due to the soldier, but in an equal, if not greater measure, to the adventurous pioneers themselves, and to that new and greatest of civilizers, the railroad. The Pacific Railroad from Omaha to San Francisco is now part of the Great Route which circles the earth, and is daily traveled by Europeans, Americans, and Asiatics in as much safety and with as much comfort as from New York to Chicago. The Southern Pacific Railroad is approaching completion, traversing Kansas, New Mexico, Arizona, and Southern California, soon to include Texas and New Orleans.

The President, you, and I have recently passed across that hitherto desolate and dangerous region in safety and comfort.

The Northern Pacific Railroad is making rapid progress from Bismarck westward and from the Columbia River eastward; and many other subordinate roads, as described by General Sheridan, are penetrating every valley and every district of country which hold out an inducement to settlement.

These railroads have completely revolutionized our country in the past few years, and impose on the military an entire change of policy. Hitherto we have been compelled to maintain small posts along wagon and stage routes of travel. These are no longer needed, because no longer used, and the settlements which grow up speedily along the new railroads afford all the security necessary, and the regular stations built for storage at convenient distances afford the necessary shelter for stores and for the men when operating in the neighborhood. We should now absolutely abandon many of the smaller posts hitherto necessary and concentrate at strategic points, generally near the national frontier or

where railroads intersect, so as to send out detachments promptly to the districts where needed.

Congress alone has the power to dispose of the property of the United States, and we, the military, find ourselves possessed of lands and houses obtained in earlier times which demand occupation for preservation. Under existing laws, also, "permanent buildings" cannot be erected without the sanction of Congress; and even when the sale of any old military site and buildings has been authorized the money has, by law, reverted to the Treasury, and could only be utilized again by a new appropriation. From the nature of things Congress cannot and does not give its time and attention to such small matters, and I earnestly recommend that provision be made by law similar to that for the sale of military stores in section 1241 of the Revised Statutes, for the sale of such abandoned military posts and buildings as are found to be unnecessary, with the right to apply the proceeds of sale to other places the property of the United States. Your own observation during your recent tour of the Pacific States and Territories will afford several examples where the best economy would result from this change of policy. In Kansas, New Mexico, and Arizona nearly all the posts are along old wagon and stage roads not touched by the *new* railroads, and in some instances a single new post would subserve the uses of half a dozen old ones, but the difficulty of obtaining a new appropriation from Congress and the necessity of preserving some immediate shelter for the men has forced us to cling to these old posts, though at great expense and inconvenience. In most instances the buildings are of stone or adobe, which cannot be removed, but would sell readily for cash and become the nuclei of new towns, farms, or ranches. To illustrate, I invite your attention to the map of Arizona and New Mexico, near where we recently passed by railroad. Forts Bowie, Grant, Bayard, Mimbres, Cummings, McRae, Craig, Thorn, and Selden, all built at great cost by our predecessors under a necessity then most urgent, could now be replaced by a single post on or near the Southern Pacific Railroad, whence detachments could be sent promptly to any threatened quarter.

The same occurs on the Northern Pacific Railroad. Forts Keogh and Custer, built on the Yellowstone only four years ago, near the site where General Custer's whole command was obliterated by hostile savages, will soon become commercial towns rather than military posts.

In my judgment the time has now come for the military authorities to select suitable strategic points for permanent occupation and improvement, whence detachments can be sent out for special service. As long as we possess and must care for these small posts it is impossible to abandon them to waste, and we are forced to hold on to them, but if Congress will delegate to the President, the Secretary of War, and a board of officers the right to sell these posts and appropriate the proceeds of sale to strategic points, I am certain it will result in great economy, and enable us to maintain larger garrisons with increased discipline and better service.

For similar reasons, and because the commerce of the world is carried on in ships of three thousand tons and over, and because of the heavy draught of war vessels, most of our sea-coast forts are superfluous. We now have fifty millions of people, and the idea of any hostile force landing on our coast is simply preposterous. Yet our great commercial ports should be made so safe that even an apprehension of danger would not be felt. Portland, Boston, Newport, New York, Philadelphia, Hampton Roads, Fort Royal, Key West, Pensacola, New Orleans, San Diego, San Francisco, and Port Townsend should all be properly fortified and garrisoned.

All minor forts should be abandoned. An annual appropriation of a million of dollars would in ten years put these forts in good order, and another million a year would properly arm them, and the Secretary of War and President should have discretion as to the disbursement of this money. Artillery officers should also be associated with the engineers in constructing, altering, and repairing sea-coast forts, because the men who have to fight these batteries should have something to do in their construction.

I now beg to invite your special attention to the annual reports of General Schofield, commanding the National Military Academy at West Point, and of Col. George W. Getty, of the Artillery School at Fort Monroe. In my judgment both of these institutions are in as good order as possible, and both are an honor to the country.

Education must always be the surest basis of national security and honor. The education and manly training imparted to young men at West Point has repaid the United States a thousand times its cost, and has more than verified the predictions of General Washington. From time to time periodical complaints have arisen to its prejudice, such as occurred last year in regard to the colored cadet, Whitaker. A thorough, patient, close investigation, in the midst of a tumult of abuse, resulted in a perfect vindication of the authorities of that Academy. Every cadet at West Point is an appointee of a member of Congress, each member having a cadet of his own nomination there, with only ten appointed by the President at large. The corps of cadets is therefore a youthful counterpart of our national House of Representatives. The same laws, the same regulations, the same instruction, books, clothing, and food are common to all, and a more democratic body never existed on earth than is the corps of cadets. Prejudice is alleged against colored cadets. Prejudice of race is the most difficult thing to contend against of any in this world. There is no more such prejudice at West Point than in the community at large, and the practice of equality at West Point is in advance of the rest of the country. The authorities at the Academy have no voice in the selection of candidates, and must receive, train, and educate such as are sent there, regardless of nationality, color, or previous condition. To discriminate in favor of a colored boy by reason of his color is as much a violation of the fourteenth amendment of the Constitution as to discriminate against him, perfect impartiality being the true rule, and that I believe the authorities at West Point have endeavored to follow. In this connection I desire to state that in my judgment the requirement that all the enlisted men of the Ninth and Tenth Cavalry and of the Twenty-fourth and Twenty-fifth Infantry shall be colored men, whilst the officers are white, is not consistent with the amendment of the Constitution above referred to. All men should be enlisted who are qualified, and assigned to regiments, regardless of color or previous condition. Such has been the law and usage in the Navy for years, and the Army would soon grow accustomed to it. No body of men on earth have more reverence for the Constitution and the laws than the Army, and I pledge my own and the good faith of all in the service to enforce faithfully every part of the Constitution of the United States and every law made in pursuance thereof.

General Schofield is abundantly able to enforce the laws and regulations of the Academy, and I again refer to his report for the history of this case, as also of all other matters pertaining to that institution.

The education at Fort Monroe, under the supervision of Colonel Getty, is purely professional, and limited chiefly to the artillery arm of service. This education cannot be found in any other college in America, and is



valuable only because the use of artillery is limited to war on a large scale, and cannot be learned in our Indian wars or in common life. When a necessity arises for artillery officers, as in our Mexican war, and also our civil war, it is sudden and immediate. This school costs nothing but the ordinary garrison expenses. I still desire to establish a similar school for infantry and cavalry at Leavenworth as soon as the condition of Indian affairs will admit of the sure release of some good infantry regiment from the distant frontier, which I hope will occur within the next year.

In conclusion, I beg to state that the entire Army is, in my opinion, as patriotic, as patient, as willing to encounter danger and hard service as at any former period of our history. The rapid extension of railroads and mails has much improved the general condition and contentment of officers and men, and they simply suffer the usual fate of peace in slow promotion and apprehension of changes which never come. The country is so large that regimental transfers and changes are costly, and the consequence has been that many regiments have remained longer in remote quarters than seemed fair; but I have endeavored to make regimental changes as fast as possible, consistent with the annual appropriations.

I am, with great respect, your obedient servant,

W. T. SHERMAN,  
*General.*

Hon. ALEXANDER RAMSEY,  
*Secretary of War.*

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## REPORT OF THE ADJUTANT-GENERAL:

HEADQUARTERS OF THE ARMY,  
*Adjutant-General's Office, Washington, October 11, 1880.*

GENERAL: Pursuant to your instructions, I have the honor to submit the annual returns of the Army:

- A.—Organization of the Regular Army.
- B.—Return showing actual strength of the Regular Army.
- C.—Distribution of troops in the Departments of Missouri, Texas, Platte, and Dakota—Division of the Missouri.
- D.—Distribution of troops in the Departments of the East and South—Division of the Atlantic.
- E.—Distribution of troops in the Departments of California, the Columbia, and Arizona—Division of the Pacific.
- F.—Department of West Point.
- G.—Military geographical divisions, departments, and posts, with distribution of troops, post-offices, telegraph stations, and nearest railroad stations or boat landings.
- H.—Statement of casualties during the fiscal year ending June 30, 1880.
- I.—Statement of the number of trials of enlisted men by general courts-martial during the fiscal year ending June 30, 1880.
- K.—Statement of assignments of recruits and re-enlistments during the fiscal year ending June 30, 1880.

A critical examination of the rolls and returns of the Army discloses some very interesting statistical data, to which I beg to call your attention.



Out of a nominal strength of 25,000 men, 6,129 (very nearly one-fourth) are, under the provisions of the law of August 4, 1854, drawing increased pay for each five years of continuous service, as follows:

3,762 for five years.

1,872 for ten years.

227 for fifteen years.

130 for twenty years.

97 for twenty-five years.

41 for thirty years.

Under the law approved May 15, 1872, the pay of soldiers is increased \$1 per month for the third year of enlistment, and \$1 additional for each of the fourth and fifth years, and men enlisted or re-enlisted under the provisions of the act of August 4, 1854, are entitled to the rate of pay allowed for the fifth year.

567 men will, during the fiscal year ending June 30, 1882, become entitled to re-enlisted pay.

2,911 to \$1 per month additional for third year of service.

3,057 to \$2 for fourth year.

3,662 to \$3 for fifth year.

#### PROMOTIONS FROM THE RANKS.

Sections 3 and 4 of the act of June 18, 1878, provide for the promotion to the grade of 2d lieutenant of meritorious non-commissioned officers, and prescribe regulations to insure selection of proper candidates. The beneficial effects of this wise legislation are best demonstrated by the statement that, under this act, there have been promoted (appointed) 1 in 1878, 5 in 1879, 13 in 1880, and 1 yet to be appointed, October 4th, making a total of 20 promotions. This powerful spur to the ambition of young men entering the ranks will tend to still further elevate the "morale" of the Army. The increase in the number of promotions on the one hand and the steady decrease in the number of desertions on the other, indicate that, by a gradual but steady progress, the men are reaching a higher level and healthier tone.

#### CONFLICTS WITH INDIANS.

The reports of the ever recurring conflicts with hostile Indians exhibit gallant acts and soldier-like endurance of hardships highly creditable to the troops. It is suggested whether the fortitude, endurance, and courage evinced does not, in specially distinguished instances, deserve some recognition at the hands of the government.

That the harassing services of the troops indicate an actual state of, at least, demi-war, is fully shown by the following statement of the number of officers and men killed, or who died of wounds received in actions with Indians:

1876—16 officers and 272 men; 1877—7 officers and 121 men; 1878—2 officers and 8 men; 1879—2 officers and 32 men; making a total, for the four years, of 27 officers and 333 men.

#### CERTIFICATES OF MERIT.

Section 1216, Revised Statutes, provides that when any *private soldier* shall have distinguished himself in the service, the President may grant him a certificate of merit, on the recommendation of the colonel of his regiment.

To bring non-commissioned officers, as well as privates, within the purview of the above-quoted section, it is suggested that it be amended by substituting for "private soldier" the words "enlisted man."

#### VETERINARY SURGEONS.

By section 37 of the act of March 3, 1863 (section 1102, Revised Statutes), the grade of veterinary surgeon was created with assimilated rank of sergeant major, and pay at the rate of \$75 per month. The law of July 28, 1866, section 3, added four regiments to the cavalry arm, with the same organization as provided by law for cavalry regiments, but "with the addition of one veterinary surgeon to each regiment, whose compensation shall be one hundred dollars per month."

Thus, with precisely the same organization, *four* of the regiments have two veterinary surgeons, and *six* have but one, and at the lower rate of pay. If a cavalry regiment absolutely requires the services of two surgeons of that class, then all the regiments of that arm of the service should be placed on the same footing. In the contrary case, if only one suffices, then four of the ten regiments have one veterinary surgeon too many.

#### RESTORATION BY CONGRESS OF OFFICERS OUT OF SERVICE.

This subject is one of vital importance to the welfare of the Army, and, if not promptly remedied, will, slowly, perhaps, but not the less surely, sap the very foundations of the reputation justly earned by officers of the Army for high moral tone, unblemished character, and sterling worth.

It has become the custom for officers dismissed by sentence of court-martial and dropped from the rolls of the Army to importune Congress for restoration to the position they have forfeited by the verdict of a court of their peers, reviewed and approved by the department commander, and confirmed by the President of the United States. The bill for restoration is referred to the Committee on Military Affairs, and by it, in many cases, placed in the hands of a sub-committee, before whom the claimant appears either personally or by attorney. The pressure of other duties not unfrequently prevents the sub-committee from giving the voluminous papers called for from the files of the War Department that careful and searching scrutiny such a case demands, having in view the baneful influence on the Army of the restoration to its rolls of a man unfit to hold a commission.

As a check on such claims, it is suggested that applicants for restoration be required, by statutory enactment, to present their claims to a board of officers to be appointed by the President, whenever, in his opinion, the applicant has an equitable claim to a further hearing.

#### RIFLE TARGET SHOOTING.

I desire to call your attention to the highly interesting report of Inspector General N. H. Davis of his visit to Creedmoor, Long Island, N. Y., to witness the rifle shooting of the Army teams, September 14-16 of the present year, at the eighth prize meeting of the National Rifle Association.

The three Army teams (composed of twelve men), one each from the Military Divisions of the Atlantic, Missouri, and Pacific, entered the contest for the prize in the "international military match" with one

team from each of the States of Connecticut, New Jersey, and Pennsylvania. The match was well contested, and the scores made were highly creditable, as well as very satisfactory. Colonel Davis reports the wind variable, the only constant quantity in this element of conditions to be considered being inconstancy.

The total scores of the contestant teams placed them in the following order: Division of the Missouri, Division of the Atlantic, Division of the Pacific, New Jersey, Connecticut, and Pennsylvania. Compared with the record of last year, the shooting of the Army teams is as follows :

Score.

Teams.	200 yards. (Possible 420.)	500 yards. (Possible 420.)	600 yards. (Possible 420.)	Grand total. (Possible 1,260.)
1879.				
Division of the Atlantic .....	333	358	309	1,000
Division of the Missouri.....	330	334	297	961
Division of the Pacific.....	336	326	291	953
1880.				
Division of the Atlantic .....	334	363	317	1,014
Division of the Missouri.....	342	364	317	1,023
Division of the Pacific.....	334	348	322	1,004

In other prize matches the Army was represented, either by teams or individually, with the following results:

In the "military championship match," the Army took 12 out of 17 prizes, carrying off the first 5; in the "Judd match," 9 prizes; in the "short-range match"—competing with small-bore rifles with peep-sights—it carried off 6 prizes; and, finally, in the "team match," from companies of 200 yards, 18 teams competing, the first and second (and only) prizes were earned by Companies B and A, respectively, of the Engineer Battalion; Company C of the same command standing fourth.

It is conceived nothing need be added to the above statement of results. They attest great improvement in rifle shooting, and prove incontestably the advantage accruing to the Army by its participation in these contests in raising the efficiency of our troops for field operations.

The recommendation concluding Colonel Davis's report is earnestly concurred in, viz: That the government should offer military prizes and rewards to the successful competitors in the various matches in which officers and men of the Army participate.

RECRUITING SERVICE.

The rendezvous of the general recruiting service have, in the past two years, been established at New York, Boston, Buffalo, Harrisburg, Baltimore, Cincinnati, Cleveland, Indianapolis, Chicago, Saint Louis, Washington, San Antonio, and San Francisco. Temporary rendezvous were opened at Memphis and Nashville, with a view to the enlistment of a larger number of colored men than could be obtained at the rendezvous for the general service.

These are changed as the wants of the service and the condition of the recruiting funds may make it necessary. Each rendezvous is under the charge of an officer who is required to give his personal attention to each enlistment, so that none but proper persons are received into the

Army, no misrepresentations are made to applicants, and the requirements of the law relative to enlistment of minors are as strictly observed as circumstances will admit. The evidence of the care taken in the selection of men for the service is apparent in the fact that, out of 23,300 applicants, but 5,026 were enlisted—not quite 22 per centum of the whole number.

The accompanying tables (marked L, M, and N) exhibit in detail the nativities and occupations of accepted recruits, and the divers causes which led to the rejection of a large number of the applicants for enlistment.

There is a very perceptible improvement in the class of men applying for enlistment in the past few years, and there is every reason to believe the opportunity offered by the act of June 18, 1878, to advance the more soldierly and intelligent to commissions, has done much to influence a better class of men to enter the Army.

The serious defect in our recruiting system of relieving, at one time, all the officers connected with that service, and replacing them by inexperienced officers, has prevented the accumulation of information from which to improve the efficiency of the recruiting service, and measurably, at least, of acquiring important data by which the military resources of the country may be more readily determined.

It is believed the change indicated in recent orders, that future details for the recruiting service will only be made by one-half the regiments in each year, will relieve the service of a serious embarrassment and be productive of good results. As an aid to this, and to enable the department to collate data for future use, an officer of the Adjutant-General's Department has been assigned to duty at the headquarters of the recruiting service in New York.

It is deemed of great importance and infinitely preferable that recruits joining regiments should have received sufficient military instruction to enable them to perform company duty. Joining, as they generally do, at the outset of a campaign, no time is afforded company officers to instruct them, nor will the demands of the service on our skeleton organizations admit of it. It would be better to have three years' service of a well-instructed man than to have five of a man indifferently instructed in his duties. Every possible effort is made, to the extent of our means, to obviate this difficulty, but, I regret to say, with indifferent success. I therefore renew the recommendation of my distinguished predecessor, that 1,000 men in excess of the authorized strength of the Army be allowed for thorough instruction at the depots.

#### BUILDINGS AT DAVID'S ISLAND, NEW YORK HARBOR.

In September of last year Maj. S. N. Benjamin, assistant adjutant-general, was detailed to make a thorough examination into the condition of the buildings at present in use at the depot, and they were reported by him as leaky, cold, in a general tumble-down condition, unsafe as well as unfit for habitation, and not worth repairing.

The Secretary of War, January 19, 1880, transmitted to Congress the letter of my predecessor, inclosing plans and estimates (the latter amounting to \$144,970) for permanent buildings to complete the principal depot of the general recruiting service at that place. The papers, unfortunately, were referred to the Committee on Military Affairs instead of the Committee on Appropriations, and the fact was discovered too late to secure Congressional action.

The general depot was formerly established on Governor's Island, but

this place having been selected by the commanding general of the Division of the Atlantic and Department of the East for his headquarters, under paragraph 11 of General Orders No. 38, of 1878, based on the act of Congress approved June 18 of that year, it became necessary to remove the depot to David's Island. This place is now the general depot for recruits enlisted in the Cismississippi States. The average strength at the post during the past year was 349.

Besides the present importance of this point as a general recruiting depot, it must be borne in mind that, should it ever become necessary to concentrate a considerable body of troops in the vicinity of the city of New York, either for service on the sea-coast or with a view to its embarkation for distant service, there is no place now in the possession of the government affording greater facilities or as admirably adapted for such a purpose as David's Island.

#### BUILDINGS AT COLUMBUS BARRACKS, OHIO.

Plans and estimates for certain additional brick buildings for the subdepot at the above place were also submitted to the Secretary of War, and by him referred to Congress January 19, 1880. The amount asked for was \$2,200.07. Full details, as well as the reasons which led to asking for the appropriation, are set forth at length in Senate Executive Document No. 49, Forty-sixth Congress, second session.

Further estimates for chapel and school (amounting to \$5,783.03) were transmitted April 8, 1880. (See Senate Executive Document No. 146, second session of same Congress.)

The reasons given for the non-action of Congress in the case of the buildings on David's Island apply equally to this case. The great importance of these much-needed improvements leads me to earnestly renew the recommendation heretofore made, that the early attention of Congress be called to this matter.

Respectfully submitted.

R. C. DRUM,  
*Adjutant-General.*

General W. T. SHERMAN,  
*United States Army.*

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#### REPORT OF THE INSPECTOR-GENERAL.

HEADQUARTERS OF THE ARMY,  
*Inspector-General's Office, Washington, D. C., October 9, 1880.*

SIR: The following report of the operations of this department is respectfully submitted for the information of the honorable Secretary of War and the General of the Army.

Since the rendition of my last annual report there has been no change in the rank, number, or station of officers of this department.

The undersigned has been in charge of the office at these headquarters, performing the various duties pertaining thereto; and, besides making several special investigations under the orders of the Secretary of War, he has examined the accounts of certain disbursing officers, and made inspections of the Leavenworth military prison, under section 1348, Revised Statutes.

Inspector-General Delos B. Sacket has been on duty at the head-



quarters of the Military Division of the Missouri, under the orders of the Lieutenant General, commanding. He has also inspected the accounts of disbursing officers in the division, not under the orders of the division commander, and served as a member of a board of officers convened in this city by Special Orders No. 145, Adjutant-General's Office, July 1, 1880, for the purpose of examining and reporting upon the codification of the Regulations of the Army.

Inspector-General Edmund Schriver has been stationed at the headquarters of the Military Division of the Pacific, performing his appropriate duties, under the orders of the major-general commanding, and has recently completed a thorough inspection of most of the garrisoned posts within the Department of the Columbia.

Inspector-General Nelson H. Davis has been stationed at the headquarters of the Military Division of the Atlantic, engaged in making investigations and inspections, under the orders of the major-general commanding.

Assistant Inspector-General Roger Jones has continued on duty in this office as my assistant, and, in addition to his regular current duties, has performed other important services under the orders of the Secretary of War.

Assistant Inspector-General Absalom Baird has been on duty at the headquarters of the Military Division of the Missouri, and has been engaged in making inspections and investigations, under the orders of the Lieutenant-General, commanding.

The following-named officers have been performing the duties of assistant inspector-generals in the different departments since my last annual report:

Lient. Col. John S. Mason, Fourth Infantry, in Department of Texas.

Lient. Col. William B. Royall, Third Cavalry, in Department of the Platte.

Maj. James Biddle, Sixth Cavalry, in Department of Arizona.

Maj. Richard Arnold, Fifth Artillery, in Department of the East.

Maj. Edwin C. Mason, Twenty-first Infantry, in Department of the Columbia.

Maj. John J. Coppinger, Tenth Infantry, in Department of the Missouri.

Capt. George B. Russell, Ninth Infantry, in Department of the South.

The above-named officers have been engaged in inspecting the garrisoned posts of their respective departments, and, under the orders of the department commanders, performing, in general, the duties pertaining to the inspection branch of the service, all of which have been executed with commendable zeal and fidelity.

No acting assistant inspector-general has been assigned for the Department of Dakota since Lient. Col. A. D. Nelson was relieved, in 1878; but Capt. R. P. Hughes, Third Infantry, aide-de-camp, on November 1, 1879, by General Orders No. 13 of the department, was assigned to take charge of the office until an officer should be regularly detailed for the position.

With very few exceptions, nearly every garrisoned military post within the limits of our territory has been carefully inspected during the past year, and reports of the same forwarded through the proper military channels to these headquarters, where they have received thorough scrutiny; and extracts therefrom have been made and transmitted to the proper authorities of such matters as required their action.

In compliance with the requirements of the act of Congress approved April 20, 1874, careful examinations have been made of the accounts of



all officers of the Army who have disbursed public money during the year. The funds received and expended, with the balances reported as due the United States, have been compared and verified by official statements from the Treasury Department and designated depositories. All the reports of these inspections are herewith submitted, ready for transmittal to Congress, as required by the law above cited.

With one exception, in which case an investigation is pending and prompt action being taken by the proper authorities, the reports show that the public moneys received by all Army officers have, during the past year, been kept and correctly disbursed according to statutory requirement; and their accounts, with a few slight clerical irregularities, which have been promptly rectified, were satisfactorily made up and rendered.

Inspector-General Davis, whose inspections during the year cover disbursements exceeding four millions of dollars, reiterates a previous recommendation, that a uniform system for keeping cash and check books be prescribed and enforced, for all disbursing officers, in which recommendation I concur.

The instruction, both theoretical and practical, in the different arms of service, has generally been satisfactory; but at some posts, where garrisons have been materially reduced in strength by the constant and necessary employment of a large percentage of the force on mechanical and fatigue labor in building, repairing quarters, &c., instruction in military exercises has not come up to the requirements of the service.

This state of things, it is believed, can be obviated only by a greater concentration of troops at suitable strategic points, and a corresponding diminution in the number of small garrisoned posts. The adoption of such a measure would swell the garrisons so as to give sufficient available men for drills and other military exercises, which would render the Army more efficient, and conduce to economy.

The inspection reports show that in the artillery arm of service the instruction given in the working of heavy guns, as well as the drill and practice with light batteries, has been signally deficient, mainly for the want of the adequate number of men and other facilities requisite for instruction. The inspector-general and the acting assistant inspector-general at the headquarters of the Division of the Atlantic and Department of the East are fully impressed with the importance of this subject, and urgently recommend, in their reports, herewith inclosed, the adoption of prompt remedial measures. The latter says:

There is every reason for calling the special attention of the authorities of the government to the neglect which the artillery arm is receiving, and to the necessity of adopting measures for more practice and study in the improved weapons of the day. \* \* \*

\* The light battery of each regiment is designated as a school to which subalterns are assigned for special instruction. In order to go through the necessary course, it is very important that these batteries should be kept full (at least 80 strong). The duties of the men are laborious at all times, and, with reduced numbers, they become dissatisfied and disheartened, which impairs the efficiency of the commands, and is likely to lead to desertion. \* \* \*

\* The condition of the armament of the forts on the coast within this department certainly calls for immediate attention by the general government.

The reports also show that the text-books for artillery instruction, prescribed in General Orders No. 67, Adjutant-General's Office, of 1866, with the exception of "Roberts' Hand-book," are, for the most part, obsolete, and contain nothing regarding the improvements and changes in guns, carriages, &c., for the past fourteen years; which facts certainly

call for a new system of heavy-artillery tactics at the earliest practicable moment.

Small-arm target-practice has continued during the past year with highly satisfactory results throughout the Army, and officers and men have, without exception, manifested the liveliest interest in preparing their teams for the competitive trials at Creedmoor. Inspector-General Davis, in his excellent report, herewith inclosed, gives a very interesting and full account of the recent target-firing at Creedmoor, which I am confident will be read with interest by the General of the Army and other military men.

The reports of the inspecting officers for the Department of the Platte show that most of the troops in that department were, in October, 1879, hurried away from their posts "without adequate winter equipment" to meet the emergency suddenly forced upon us by the Ute outbreak at White River, Colorado.

These troops were out all winter in that severe climate, and compelled to huddle themselves as best they could near White River. Owing to the deep snows, communication with their remote base of supplies was very difficult, and many officers and men were seriously frost-bitten, yet all these hardships and rough service were endured without a murmur. The scanty forage for their animals could only be provided by the troops cutting and packing willows upon their backs for them, and, for the want of proper shelter and forage, a large percentage of their animals perished.

The number of officers in the Inspector-General's Department being utterly inadequate to the proper discharge of duties devolved upon it by law, regulations, and orders, it has been deemed necessary to continue on duty as acting assistant inspector-generals the line officers herein specified.

The law approved June 23, 1874, reorganizing the Inspector-General's Department, provides that the Secretary of War may, in addition to the officers of the department proper, detail officers of the line, not exceeding four, to act as assistant inspector-generals. Prior to the passage of that law, the action of the War Department in the matter was governed by the necessities of the service; and, prior to the enactment requiring the Secretary of War to cause frequent inspections to be made of the accounts of disbursing officers of the Army, his discretion as to the frequency of these inspections was also untrammelled.

In view of the fact that the performance of this duty occupies a very large portion of the time of inspecting officers, to the exclusion of other important duties, and that, under existing regulations and orders, weekly statements of funds and monthly accounts current with vouchers, are rendered by disbursing officers to chiefs of bureaus, I am led to suggest a modification of these laws, leaving the number of line officers to be detailed for duty in the Inspector-General's Department, and the frequency of inspections of the accounts of disbursing officers, to be determined by the Secretary of War, according to the requirements of the service.

Certainly every division and department should be provided with an inspecting officer; whereas, under existing law, but four officers can be detailed to supply nine departments.

The laws governing these two matters are entitled, the first: "An act reorganizing the several staff corps of the Army"; and the second: "An act to provide for the inspection of the disbursements of appropriations made by officers of the Army." (See Statutes at Large, vol. 18, page 244, chap. 458, and page 33, chap. 117.)

The anomalous and imperfect organization of this department also calls for remedial action on the part of Congress, to the end that it may be placed on a basis that will tend to increase its efficiency and usefulness, and thereby insure the accomplishment of the object of its creation and maintenance. In brief terms, the object of the inspection branch of the service is to keep the War Department, the General of the Army, and commanding officers under whom its officers may serve, advised as to the state and discipline of the troops, as to their fitness for service, and of everything concerning their supplies and sanitary condition; and, through regular and special inspections, bring to notice of the proper authorities abuses and irregularities in every branch of the military service.

This is the true province of the Inspector-General's Department, and any system or laws which interfere with the attainment of these ends should be modified.

Each of the laws I have cited does this: the first, by reducing the number of officers in the department to the small number of five; and the second, by imposing upon them duties which materially interfere with the discharge of other responsible and important duties which properly belong to them.

I have repeatedly taken occasion to invite attention to the want of clerical assistance by officers of the Inspector-General's Department. All other branches of the staff are provided for in one way or another, but for the officers of this department, with the exception of the senior, no provision whatever is made; and I therefore respectfully urge that general service clerks be allowed to inspectors serving at department or division headquarters, or that citizen clerks be hired for them by the Quartermaster's Department, as is done for officers of the Judge-Advocate-General's Department.

The following statement of facts regarding the recent improvements and the expansion of mining and other interests in Arizona, during the past year, is taken from the annual report of the inspecting officer of that department:

There have been numerous and decided improvements made in the comforts and conveniences of the posts in this department, many of which have been effected with but little expense to the government, yet to the detriment of the discipline and drill of the troops.

The vast growth of the mining interests in the southern part of this Territory, close to and bordering on the Sonora line, can hardly be appreciated without being seen. Towns have sprung up as if by magic. The sound of mills is heard all over this section, and the flow of bullion is large and increasing each day. All this brings with it a large number of settlers who live upon the wants of the miner, and large herds of cattle and horses will accumulate along this border. All these things will be inducements to the almost Indian inhabitants of Sonora to raid and commit depredations.

There are also a large number of Americans crossing into Sonora, prospecting, building mills, and engaging in mercantile pursuits.

For the protection of these interests the inspecting officer recommends that a site for a new military post be selected on the border, and garrisoned by a sufficient force to afford such protection to our citizens as may be needed.

Inclosed I forward herewith copies of the annual reports of the different inspecting officers, so far as they have been received.

Respectfully submitted.

R. B. MARCY,  
*Brigadier and Inspector-General.*

To the ADJUTANT-GENERAL,  
*United States Army.*

## REPORT OF LIEUTENANT-GENERAL SHERIDAN.

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,  
*Chicago, Ill., October 22, 1880.*

SIR: I have the honor to submit herewith, for the information of the General of the Army, the following report, covering the operations within the limits of my command, accompanied by the reports of the department commanders.

Since the date of my last annual report, October 22, 1879, no change has been made in the organization of the division, which consists of the Department of Dakota, commanded by Brig. Gen. A. H. Terry, comprising the State of Minnesota and Territories of Montana and Dakota, garrisoned by twenty-one permanent posts, one cantonment where the Northern Pacific Railroad crosses the Little Missouri, one summer camp, and one cantonment at Poplar Creek Agency, Montana; the Department of the Platte, commanded by Brig. Gen. George Crook, comprising the States of Iowa and Nebraska and the Territories of Wyoming and Utah and a portion of Idaho, containing eighteen permanent posts; the Department of the Missouri, commanded by Brig. Gen. John Pope, comprising the States of Illinois, Missouri, Kansas, and Colorado, the Indian and New Mexican Territories and two posts in Texas, garrisoned by twenty-two permanent posts, with camps at White River, Snake River, and the Uncompahgre River, in Colorado, in the vicinity of the Mountain Utes, and also numerous camps in New Mexico, from which troops are operating against Victorio's band; also several camps in Indian Territory to keep out intruders upon the Indian reservations there; the Department of Texas, commanded by Brig. Gen. E. O. C. Ord, comprising the State of Texas, with twelve permanent posts and some fifteen camps and subposts along the southwestern frontier.

To garrison these posts and furnish troops for active operations in the field there are in the division eight regiments of cavalry, twenty of infantry (thirteen companies of which are mounted), and four batteries of artillery, aggregating 16,050 officers and men, distributed as follows:

Department of Dakota, officers and men, two regiments of cavalry, 1,542; one regiment of infantry (mounted), 521; six regiments of infantry, 2,787; total, 4,850. Department of the Platte, two regiments of cavalry, 1,458; three regiments of infantry, 1,382; total, 2,840. Department of the Missouri, two regiments of cavalry, 1,560; six regiments of infantry (three companies of which are mounted), 3,160; total, 4,720. Department of Texas, two regiments of cavalry, 1,589; four batteries of artillery, 200; two regiments of infantry, 1,851; total, 3,640.

Notwithstanding the fact that in previous annual reports I have called the attention of the government to the inadequate strength of our military forces in the Northwest and on our Northern and Southern borders, I feel it my duty to again put myself upon record in this matter.

Last year the ratio was one man to every seventy-five square miles in three of the departments, and one man to every one hundred and twenty-five square miles in the Department of Texas, and this year there is scarcely a change for the better.

To thoroughly and effectively perform the duties devolving upon us compels us many times to overlook our troops, and not unfrequently obliges us to take the field with small detachments, which have heretofore occasionally been overmatched and greatly outnumbered by our foes. This is not as it should be; but so long as our companies are limited to their average strength (fifty men to a battery of artillery, sixty



men to a company of cavalry, and forty men to a company of infantry), it cannot be avoided.

Our officers and men are in all respects the equals of any army in the world in point of intelligence, activity, and devotion to duty, and no army of its size accomplishes one-third as much hard work from one year's end to another as our own. Compelled as it is to keep in advance of the wave of civilization constantly flowing westward, and to watch the Northern and Southern borders and guard them from incursions of savage foes, and also to be in readiness to repress any outbreaks upon the Indian reservations, to say nothing of having to make new roads, erect forts, and furnish escorts for surveying and exploring parties, it is, as I have said, overworked, on account of its inadequate strength for the service required.

The fact that our Army is so small adds greatly to its expense, for whenever it becomes necessary to use a force of any magnitude whatever against the Indians, we are compelled to send troops by rail or steamboat from a large number of small posts, to enable us to take the field with any prospect of success, and the cost of transportation incurred by these concentrations becomes a serious item in our annual expenditures.

Our frontier is so extensive that for the present we are compelled to adhere to a system of small posts, though it is both inconvenient and costly. General Pope, in his accompanying annual report, calls attention to this fact and urges a change, but until the railways now being built throughout our Western and Southwestern country are completed, it will not be wise to alter the existing condition of affairs. When these roads have made their connections with the Pacific slope and established their termini in the mountains, it will be time enough to move in this matter. Still that time is not very far distant, and it is well to discuss the creation of permanent posts and regimental garrisons in advance, and I therefore call particular attention to General Pope's arguments in favor of the change in our existing frontier system.

Amongst our strongest allies in the march of civilization upon the frontier, are the various railway companies who are now constructing their new lines with great rapidity.

In the Department of Dakota, the Northern Pacific Railway has crossed the Missouri River at Bismarck, and is now about one hundred and fifty miles west of that place, and it is confidently expected to reach the banks of the Yellowstone River by next summer. The Chicago and Northwestern Railway Company has completed a branch road to Fort Pierre on the Missouri River, and has already finished its surveys to Deadwood, Dakota, which it is expected to reach next September. The Chicago, Milwaukee and Saint Paul Railway has a branch road within a few miles of the mouth of American Creek, on the Missouri River, and expects to reach the Black Hills of Dakota by next September.

The railways above mentioned lead to the extensive basin of the Upper Missouri, lying between the Bighorn Mountains and the Black Hills of Dakota on the south, and the boundary line between the United States and British North America on the north, and the main chain of the Rocky Mountains on the west.

This vast basin includes portions of the Territory of Wyoming, nearly all of Montana and the Territory of Dakota. It is a section of great value on account of its extensive and rich grazing lands. The grasses grow luxuriantly and are of many varieties, the principal and most valuable being bunch and gama grass. The very light fall of rain in the latter part of summer and fall does not rot the grass, but it slowly dries

on the ground and becomes good and nutritious hay, without the usual trouble of cutting and curing, and experience proves that the annual snow-fall in the basin named is not heavy enough to prevent the cattle from getting good feed during the entire year, and although the winters are cold, they are invariably dry, and the cattle are not subjected to the condition of alternate freezing and thawing, and consequently thrive well and keep in better condition than where they are liable to undergo greater climatic changes.

Settlements are being made in every direction throughout this extensive grazing and agricultural section, and for their protection and development we have established the posts of Fort Meade, located just north of the Black Hills; Fort McKinney, at the northern base of the Bighorn Mountains; Fort Custer, on the Bighorn River, and Fort Keogh, on the Yellowstone River. Also a new post in process of construction, to be called Fort Maginnis, and located at or near the eastern edge of the Judith basin, and not far from the Musselshell River. Farther north, near the line of the British Possessions, we have built the large post of Fort Assinaboine, and hope that Congress at its ensuing session will appropriate funds to enable us to establish another post which I have heretofore recommended to be built—and which the department commander, General Terry, recommends in his accompanying annual report, and in a previous annual report—at or near Frenchman's Creek, not very far distant from the Canadian line.

It is almost impossible, without a personal inspection of this part of our country, for any one to even approximately estimate the immense value of the cattle interests which will hereafter be established in this extensive section of our developing frontier. This basin also possesses agricultural advantages nearly if not fully equal in value to the grazing interests described above.

In the Department of the Platte, the Utah Northern Railway, starting from Ogden, on the Union Pacific Railway, has a branch road completed as far north as Dillon Station, about one hundred and twenty miles from Helena, Mont., and will be extended to that point at as early a day as possible. Another railway is now being built from Fremont, Nebr., by way of Oakdale in the direction of the Niobrara River, aiming for the Black Hills of Dakota, and it will pass within a short distance of one of our new posts, Fort Niobrara, now in process of construction. Another new railway is also under survey which is to run north from Cheyenne, Wyoming Territory, toward the Black Hills, and will have a branch turning westward from near Fort Laramie toward the Bighorn Mountains. Other railways are also being built in this military department, but as they have no especial military bearing, it is not thought best to mention them in this report.

The cattle herds in Northern Nebraska have been augmented by thousands of animals during the past year, both by the natural increase and by importations from points farther south, and from Texas and Colorado.

Under the stimulus of our present general prosperity, emigrants are rapidly taking up land everywhere in the West, and towns and hamlets are so quickly springing up that almost constant additions have to be made to our military maps to enable us to keep posted regarding the spread of our frontiers.

The new post of Fort Niobrara, on the river of that name, was located about sixty miles south of Spotted Tail Agency, in order to give greater security to the settlers, and to protect the interests of cattle ranchers in that section whose herds are already of immense size.

In the Department of the Missouri, the Atlantic and Pacific Railway



has been rapidly pushed forward through Southern Kansas, just north of the line of the Indian Territory, and will cross the Raton Mountains and intersect the Atchison, Topeka and Santa Fé Railway at or near Albuquerque, and will then follow the thirty-fifth parallel of latitude passing north of the Navajo Reservation, and thence on the same parallel, or as near as may be, to the Pacific coast.

To give protection to this railway and the settlements in the San Juan Valley, and to enable us to exercise a controlling influence over the Navajoes, a new post is now under construction in Northern New Mexico—northeast of the Navajo Reservation on the Rio de la Plata. The post has also a military bearing upon the narrow-gauge road now being built from Alamosa in the Rio Grande Valley down the valley to a point near Conejos, from whence it runs westward, crossing the headwaters of the Chama, the San Juan, the Pedrad, the Los Pinos, and Florida Rivers, until it arrives at the Animas River at or near Animas City, at which place it is expected to be early next summer, and I am told that it is the intention of the company to push it north via the cañon of the Animas to Silverton, which is located in the midst of an extensive and valuable mining country.

The Denver and South Park Railway has been completed to Leadville, Colo. The Denver and Rio Grande Railway has also been extended up the Arkansas River to Leadville, and work has already been commenced on a branch of this road from the town of South Arkansas, crossing the great Continental Divide by Marshal Pass to the town of Gunnison, in the valley of the Gunnison River. The Denver and South Park Railway has also made its surveys on the continuation of its line across the Alpena Pass to Gunnison, where, in anticipation of its arrival, they have already built a substantial stone depot.

There is still another narrow-gauge railway surveyed and located from the Arkansas River, either from the town of South Arkansas or Arkansas City, across the Monarch Pass terminating at Gunnison City.

These mountain railroads are built almost entirely under the stimulus of our great mining interests in Colorado.

The Atchison, Topeka and Santa Fé Railway will before long reach the vicinity of El Paso, a point on the northeastern corner of Old Mexico, and having already secured charters from the republic of Mexico, will cross our frontier near the town of El Paso and build to Chihuahua, and from thence to Durango and then on to Zacatecos; thence across the mountains to Leon, and push on to the city of Mexico, work having already been commenced from the city of Mexico north to Leon. This route will undoubtedly be of great commercial value, and it is worthy of international encouragement. It is located upon the northwest line of the best mineral and agricultural lands of Mexico, and may be justly regarded as the greatest railroad enterprise that is as yet uncompleted on this continent. The incorporators of this railway are also building a branch road from Guaymas on the Gulf of California, and through the rich mineral and agricultural State of Sonora in Mexico, to intersect the Grand Trunk Road at El Paso, or some convenient point north of that place in New Mexico.

In the Department of Texas the progress of the advancing settlements and the tide of emigration has been almost unparalleled, and the northern line of the frontier has been thrown forward by hamlets, farms, and cattle ranches, with marvelous rapidity.

The Texas Pacific Railway has been steadily extending its line westward, and is now at Gordon, seventy-five miles west of Fort Worth, and is at present stretching out towards the Pecos River, passing through a

belt of good agricultural land over one hundred and fifty miles in length.

For the protection of this portion of our frontier, and to defend the exposed settlements Congress has made an appropriation for new posts, one of which will be built at, or near, a point north of the railroad and on the cattle trail which passes through the Pan Handle of Texas from the head of the Concho River by way of Fort Elliott to the Arkansas River west of Fort Dodge. To further develop and protect this line of frontier a small post will be established north of Fort Davis, not far from the point where the Texas and Pacific Railway will cross the Pecos River. Another small post will be built near the Guadalupe Mountains, and still another in the new mineral district not far from Presidio del Norte.

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To keep in advance of our settlers, to give protection to the surveying and construction parties of the railways, to open new paths through the mountains and across the plains, to open up the country and guard the feeble settlements and mining camps from the Indians, and to secure the Indian in his just rights against the encroachments of white men, to keep out unauthorized parties from established Indian reservations, and generally to give a place of refuge to the weak along our exposed frontier by the establishment of military posts, has been the work of our little army for many years past, and it is a work that has been to my knowledge well and faithfully accomplished.

For the details of the movements of troops, scouts, engagements, and marches for the past year, I refer you to the accompanying reports of department commanders to whom, and to the officers and men of their commands, the country is indebted for valuable services in the opening up of our Western mountains and plains.

I have the honor to be, sir, very respectfully, your obedient servant,  
P. H. SHERIDAN,  
*Lieutenant-General, Commanding.*

Brig. Gen. R. C. DRUM,  
*Adjutant-General United States Army, Washington, D. C.*

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## REPORT OF THE ADJUTANT-GENERAL.

WAR DEPARTMENT,  
 ADJUTANT-GENERAL'S OFFICE,  
*Washington, October 30, 1880.*

SIR: I have the honor to submit my annual report for the year ending September 30, 1880.

### MILITIA.

Deeply impressed with the importance of the uniformed State militias as the nurseries which in time of war furnish officers to organize and command the volunteer forces, I addressed, in July last, a letter to the adjutant-generals of the States, indicating a warm desire to be of any service to the State forces (copy of which, marked A, is herewith). My earnest wish is to still more assimilate the rules and forms governing both the regular Army and the militia. It needs no special argument to demonstrate the manifold advantages that would necessarily flow from perfect uniformity. Trained by the same manuals; using—in the internal economy of a company, regiment, or brigade—the same forms for

returns, requisitions, reports, &c.; governed in their annual encampments precisely in the same manner as a military camp in the presence of an enemy, almost every member of the State Guards would be qualified for a commission in the volunteers. Under this plan, in actual need, 100,000 men, so officered, could be added to the regular Army without jarring or confusion, and at the outset, would have the advantage of being "well in hand," the great desideratum of an army in active service. The responses of the States adjutant-generals are so cordial, and express so much satisfaction at the step taken, that I beg to inclose copies (marked B to X). In furtherance of the views expressed above, I earnestly recommend that on the application of the adjutant-general of a State, I be authorized to issue, in moderate quantities, such blanks and forms as may be indicated by him as desirable for the use of the State troops, especially during the summer encampment.

#### INSPECTION OF NATIONAL GUARD ENCAMPMENTS.

During the past summer the following-named officers have been detailed, at the request of the State authorities, to visit, inspect, and report upon the several encampments named, viz:

Lieut. Col. Roger Jones, assistant inspector-general.—Encampment of the Connecticut State Guard, at Niantic, Conn.

Lieut. Col. G. A. De Russy, Third Artillery.—Encampment of three brigades of Pennsylvania National Guards, at Camp George G. Meade (Fairmount Park), near Philadelphia, Pa.

Maj. Richard Arnold, Fifth Artillery.—Encampment of Massachusetts National Guards, at South Framingham, Mass.

Maj. Horatio G. Gibson, Third Artillery.—Encampment of brigades of Pennsylvania National Guards, at Pittsburgh, Pa.

Capt. J. P. Sanger, First Artillery.—Artillery camp of the State of New York, near Fort Hamilton, New York Harbor.

The results of the inspections made, as presented in the reports, are highly creditable to the troops concerned, and for the purpose of public record, I beg to inclose copies (marked Y, Z, A<sup>1</sup>, A<sup>2</sup>, and A<sup>3</sup>) of these interesting papers.

#### MILITARY COLLEGES.

Section 1225 of the Revised Statutes authorizes the President to detail an officer of the Army as professor of tactics and military science at such colleges and universities as possess an educational capacity of at least 150 students, upon the application of such established college, &c.

I do not think the importance of this early and partial introduction of the youth of the country to military studies and habits can be overestimated. The course of instruction does not interfere with the scholastic curriculum, nor prevent them from entering any of the several walks of civil life for which they are preparing themselves. It, however, leads them to affiliate, in after life, with the militia of their respective States, and, enhancing their value as members of such organizations, increases measurably the capacity of the States National Guards to furnish trained officers to the country in its hour of need.

That the fullest information may be obtained concerning the working of the system, the officers of the Army on duty at the colleges, &c., have, by your direction, been required to make to this office quarterly reports of their duties as well as of all matters properly pertaining to the military department of the institution at which they are serving.

The accompanying table exhibits the apportionment of details, corrected to October 1, 1880.

## PAPERS ACCOMPANYING THE

States and groups.	Aggregate population and groups.	No. of officers to which entitled	No. on duty in State or group.	Officers detailed.	Colleges, &c., at which detailed.	Expiration of detail.
Maine .....	628,915	.....	.....	First Lieut. M. Crawford, Jr., Second Artillery.	Powdoin College, Brunswick, Me. ....	July 1, 1882.
New Hampshire .....	318,300	.....	.....	First Lieut. A. S. Cummins, Fourth Artillery....	University of Vermont, Burlington .....	June —, 1881
Vermont .....	330,551	.....	.....			
Massachusetts .....	1,273,760	1	2			
.....	1,477,351					
.....	537,434					
Rhode Island .....	217,353					
New York .....	2,212,158	2	1	First Lieut. Chas. Morris, Fifth Artillery .....	Massachusetts Agricultural College, Amherst ...	June —, 1881
.....	4,382,759	3	3	First Lieut. ....	.....	June —, 1881
.....				First Lieut. ....	.....	June 20, 1881
.....				Second Lieut. ....	.....	July —, 1881
Pennsylvania .....	3,521,051	3	3	First Lieut. ....	Brester .....	June —, 1882
.....				First Lieut. ....	.....	June —, 1881
.....				First Lieut. ....	.....	Aug 13, 1881
New Jersey .....	906,006	.....	.....	First Lieut. ....	.....	Aug —, 1881
Delaware .....	126,015	.....	.....			
Maryland .....	1,031,111	1	1			
West Virginia .....	780,894					
.....	442,014					
Virginia .....	1,222,608	1	1	Second Lieut. Clarence Deema, Fourth Artillery	Maryland Agricultural College .....	July 6, 1881
.....	1,223,163	1	1	First Lieut. Henry Romeyn, Fifth Infantry ....	Hampton Normal and Agricultural Institute, Hampton.	June — 1881.
North Carolina .....	1,071,361	.....	.....	Capt. G. W. Evans, Twenty-first Infantry .....	Carolina Military Institute, Charlotte .....	Aug. —, 1883.
South Carolina .....	765,648					
Georgia .....	1,776,107	1	1			
Florida .....	1,164,100					
.....	187,748					
.....	1,371,857	1	1	First Lieut. George S. Doyle, First Cavalry ....	North Georgia Agricultural College, Dahlonega ..	July —, 1883.

Alabama	Mississippi	Louisiana	Second Lieut. R. D. Bolton, Twenty-fifth Infantry	Agricultural and Mechanical College of Mississippi, Hattiesville.	June —, 1883.
200,000	227,823	750,915	1		
2,531,189					
Texas	818,579				
Arkansas	484,471				
	1,303,050	1	Capt. George T. Olmstead, U. S. A.	Agricultural and Mechanical College of Texas, near Bryan.	June —, 1881
Tennessee	1,238,320	1			
Kentucky	1,321,011	1	First Lieut. R. M. Rogers, Second Artillery	University of the South, Sewanee	June —, 1883.
		1	First Lieut. R. G. Howell, Second Artillery	Agricultural and Mechanical College of Kentucky, Lexington.	June —, 1881.
Ohio	2,003,200	2	First Lieut. L. Lomia, Fifth Artillery	Ohio Agricultural and Mechanical College, Columbus.	June 28, 1861
Indiana	1,040,057	1	Second Lieut. J. F. Jefferson, Fifth Artillery	Brooks's Mill	June 30, 1882.
Michigan	1,181,059	1	Second Lieut. W. R. Hamilton, Fifth Artillery	Indiana Asile	June —, 1873
		1	Second Lieut. George R. Cecil, Thirtieth Infantry.	Michigan Mi	June —, 1872.
Illinois	2,539,801	2	First Lieut. H. T. 1	Southern Illinois Normal University, Carbondale	July —, 1883.
Wisconsin	1,054,670	1	Second Lieut. W. J	Illinois Industrial University of Hampshire	June —, 1883
		1	First Lieut. John	Galesville University, Galesville	June —, 1882
Minnesota	1,721,293	1	Second Lieut. F. P. Blair, Third Artillery	University of Missouri, Columbia	July —, 1882.
Iowa	1,191,020	1	First Lieut. Geo. A. Thurston, Third Artillery	Iowa State University, Iowa City.	June —, 1883.
Nebraska	439,706				
Kansas	122,083				
Colorado	264,390				
	39,804				
California	968,002	1	First Lieut. H. C. Dana, Third Artillery	Bishop Seabury Mission Faribault, Minnesota	— — 1879
Oregon	550,247		First Lieut. Isaac T. Webster, First Artillery	University of Nebraska, Lincoln	June 30, 1882.
Nevada	90,023				
	42,491				
	603,661	1	First Lieut. M. C. Wilkinson, Third Infantry	Tualatin Academy and Pacific University, Forest Grove, Oregon.	Aug. —, 1863

## MILITARY PRISON.

The Leavenworth military prison is now in the sixth year of its existence, and has become a permanent feature of the military establishment. Under circumstances somewhat restrictive, it has made good progress towards becoming what it is intended to be—a self-sustaining reformatory for offenders against the laws and regulations for the military service. Up to the close of the last fiscal year, 1,818 prisoners have been received and confined thereat, under sentences imposed by general courts-martial. The offense, in almost every case, has been desertion from the service, in some instances coupled with other offenses, but the great majority for desertion alone.

The affairs of the prison have been capably administered by faithful and efficient officers, under the direction of the commanding general of the Department of the Missouri. The prisoners have been kept usefully employed, and, while their punishment is made adequate, they have been subjected to no measures calculated to debase them as criminals, but, on the contrary, receive every consideration that can consistently be bestowed for their moral improvement, and they, except in rare cases, leave the prison on the expiration of their terms of imprisonment better men than when they entered, and better qualified to maintain themselves. In many instances they return to honorable service in the Army.

During the last fiscal year, 13 new buildings and extensions have been completed; 319 feet of prison-yard wall have been built—making 1,836 feet, in all, completed. The manufactories have turned out 1,915 barrack chairs, 65,000 tent pins, 15 field desks, and all the doors, sashes, &c., used for the buildings; 25,325 pairs of boots; 31,458 pairs of shoes. Nothing is manufactured except for Army service. The ground, cultivated by prison labor, has yielded 3,700 bushels of potatoes, 6,000 heads of cabbage, 1,000 bushels of corn, 680 bushels of turnips, 260 bushels of onions, 1,000 bushels of tomatoes, and other vegetables in sufficient quantity for the use of the prisoners.

The board of commissioners have visited the prison at stated periods, and have found its condition satisfactory. On their recommendation, authority has been obtained to purchase books for a library for the use of the prisoners, and \$500 have been set apart for that purpose; 667 volumes have been purchased during the latter part of the year.

It has been found impracticable to establish a gradation of punishments which could be uniformly observed throughout the Army, but, as far as possible, an equality of sentences for offenses of the same nature is kept in view in the consideration of cases of men confined at the prison.

No deaths have occurred amongst the prisoners during the year, and but 15 in all since the prison was established. Regular inspections are made by a medical officer, and strict sanitary regulations are enforced.

One most important measure is now required to complete the establishment of the prison, and it can never be entirely successful until that measure is obtained, namely, legislative authority to apply the earnings of the prison to its maintenance. A bill for this purpose was introduced in the Senate last winter, and it is earnestly hoped it will become a law during the approaching session of Congress.

For details and fuller statistics for the year, attention is respectfully invited to the reports of the officers of the prison, already submitted.



GOVERNMENT HOSPITAL FOR THE INSANE.

The following is a list of persons admitted into the above-named institution, under orders of the Secretary of War, from October 1, 1879, to October 1, 1880 :

Regular Army :	
Commissioned officers (retired).....	1
Enlisted men.....	29
Enlisted men, late of United States Army.....	8
Late volunteer service:	
Commissioned officers.....	2
Enlisted men.....	52
Inmates United States Soldiers' Home.....	6
Military prisoners.....	2
Total.....	100

WORKING OF THE OFFICE.

The present organization of the force employed in this office is as follows :

No.	Designation.	Grade.	Act of Congress under which employed.
1	Civilian clerks.....	Chief clerk.....	Act of June 15, 1880.
11	do.....	Class IV.....	Do.
17	do.....	Class III.....	Do.
25	do.....	Class II.....	Do.
151	do.....	Class I.....	Do.
30*	do.....	do.....	Do.
6	do.....	At \$1,000.....	Do.
8	Civilian assistant messengers.....	.....	Do.
30	General service clerks.....	Sergeants.....	Act of March 3, 1875.
37	do.....	Privates.....	Do.
28	General service messengers.....	do.....	Do.
22	General service watchmen.....	do.....	Do.
11†	General service clerks.....	do.....	Act of June 15, 1880.
307			

\* Additional, to expedite reports upon pension cases.  
† Under law allowing 30 additional men to the bureaus of the War Department.

This force (excepting the watchmen) is distributed among the several branches into which the office is divided, for convenience of business, each branch under the supervision of an officer of the Adjutant-General's Department. The general business of these branches (subdivided into divisions), and of the unattached divisions, may be briefly summarized as herein below indicated :

Unattached Divisions.

- Mail and Stationery Division.—Distribution of the daily mails, receipt and issue of stationery, and the preparation of vouchers against the contingent fund of the Adjutant-General's Office.
- Military Prison Division.—General correspondence and reports relating to the Leavenworth Military Prison, custody of miscellaneous letters received since 1812, record and pay-rolls of civilian clerks and messengers.
- Military Academy Division.—General correspondence and reports concerning cadetships, reports of board of visitors, and cadet registers, &c.
- Battle Reports Division.—Reception and arrangement of all battle re-

ports, completing some by information from other sources, and making copies of reports called for by the War Records Office.

*General Orders Division.*—Distribution to the Army of the general and general court-martial orders, as published; receipt and arrangement of all orders, general and special, received from the several military geographical divisions and departments; furnishing copies thereof to complete cases referred by the several branches; preparation of indexes, &c.

#### *Miscellaneous Branch.*

*Correspondence Division.*—General correspondence on miscellaneous subjects; reservation papers and correspondence relating thereto, &c.

*Record Division.*—Receipt and entry of all letters pertaining to the branch; records of admissions of officers and men into the Government Insane Asylum; recording all letters sent, &c.

*Fund and General Court-Martial Division.*—Examination of company, regimental, and post fund accounts; preparation of general court-martial orders, and memorandum reports on applications for remission or mitigation of sentences awarded military prisoners in penitentiaries.

*Special Orders Division.*—Preparation and distribution of special orders, indexing same, and furnishing copies of back orders.

#### *Appointment, Commission, and Personal Branch.*

*Appointment, Commission, and Personal Division.*—All matters pertaining to officers of the Army, post-traders, non-commissioned staff; commissions, appointments, &c.; questions of rank or pay, and preparation of the annual Army Register.

*Returns Division.*—Custody of the returns of the Army, station books of officers and the non-commissioned staff, records of establishment, location, &c., of military posts; military histories of general and staff officers of volunteers; post, regimental, and department monthly returns, and preparation of annual Army returns for Congress.

#### *Volunteer Service Branch.*

*Volunteer Service Division.*—All matters pertaining to the authorization and organization of volunteer troops, and the regimental officers thereof, except those of the colored troops.

*Enrollment Division.*—Records of the late Provost-Marshal-General's Office, offices of chief mustering officers, superintendents of the volunteer recruiting service, and all matters pertaining to enrollment and draft of the national forces during the late war.

*Disbursing Division.*—Records pertaining to collecting, drilling, and organizing volunteers, and the disbursements of the late Provost-Marshal-General's Office,

*Colored Troops Division.*—All records relating to the organization, service, and muster out of volunteer colored troops during the late war, and records of the late Bureau of Refugees, Freedmen, and Abandoned Lands.

#### *Recruiting Branch.*

Examination and entry of recruiting accounts; proceedings of boards of inspectors of rejected recruits; contracts; statement of funds; tri-monthly reports and property returns.

*Enlisted Branch.*

*Correspondence Division.*—General correspondence on all matters relating to enlisted men.

*Letters Received Division.*—Recording all letters and papers received pertaining to this branch.

*Letters Sent Division.*—Preparation and record of letters, telegrams, and indorsements; circular letters; also, registration of important papers and remailing dead letters returned to the branch.

*Regular Rolls Division.*—Furnishing military histories of officers and men of the Regular Army, custody of muster-rolls, company monthly rolls, enlistments, certificates of disability, &c.

*Volunteer Rolls Division.*—Furnishing military histories of officers and men of the late volunteer force, custody of company bimonthly rolls, correction of errors on rolls, copying mutilated rolls, &c.

*Death and Disability Division.*—Furnishing data from death and disability records, to complete military histories of men of the late volunteer force; preparation of casualty sheets of wounded, &c.

*Register Division.*—Volunteer muster-rolls copied in registers, completion and correction of defective records, &c.

*Prisoners of War Division.*—Furnishing data from records of prisoners of war, reporting on claims for commutation of rations due prisoners of war, and regimental classification of names on old records.

*Discontinued Commands and Books and Blanks Division.*—Furnishing data from records of discontinued commands bearing on claims made for property taken during the war, care and classification of records, distribution of books and blanks to the Army.

*Records of War of 1812 Division.*—Furnishing military histories of the officers and men in service during that war, completion of records, &c.

The act of March 16, 1880, authorized the employment of thirty additional clerks of Class I, for the specific purpose of enabling this office to expedite the rendition of reports upon pension claims referred by the Commissioner of Pensions, which class of work had, perforce, accumulated for want of sufficient clerical force. I desire to call attention to the following statement, giving a comprehensive view of the work done in this class of business:

*Number of pension cases on hand, received, and disposed of, from September 1, 1879, to April 30, 1880, and from May 1 to August 31, 1880.*

Number on hand September 1, 1879.....	10,404
Number received from September 1, 1879, to April 30, 1880 (8 months) .....	37,270
<b>Total .....</b>	<b>47,674</b>
Number disposed of from September 1, 1879, to April 30, 1880 (8 months) .....	32,295
Number on hand May 1, 1880. ....	15,379
Number received from May 1 to August 31, 1880 (4 months) .....	31,561
<b>Total .....</b>	<b>46,940</b>
Number disposed of from May 1 to August 31, 1880 (4 months).....	23,313
Number remaining on hand September 1, 1880.....	23,627

The above statement, although gratifying, indicates that even with the increase of force authorized by Congress, the final disposition of the cases on hand and of those not yet referred here by the Commissioner of Pensions (the latter number, I am credibly informed, exceeding 100,000) will be, of necessity, a labor of years.

The business of the office during the past year has been discharged in a satisfactory manner, and the clerks are entitled to commendation for faithfulness and efficiency.

I submit herewith (marked A'), in tabular form, a general exhibit of the work done, with the simple remark that much of the more delicate and important labor cannot be expressed in figures.

Respectfully submitted.

R. C. DRUM,  
*Adjutant-General.*

Hon. ALEXANDER RAMSEY,  
*Secretary of War.*

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### FORT LEAVENWORTH MILITARY PRISON.

UNITED STATES MILITARY PRISON,  
FORT LEAVENWORTH, KANSAS,  
July 8, 1880.

SIR: I have the honor to transmit herewith annual reports of the quartermaster, surgeon, and chaplain connected with this prison for the year ending June 30, 1880.

I also inclose herewith a tabular statement of labor performed, prisoners received, discharged, &c. During the year large extensions of shops, prison buildings, officers' quarters, &c., have been made, as shown by the following details. In the month of July, 1879, five sets of quarters for commissary sergeant, non-commissioned officers, and hospital matron, each building 16 by 32 feet, with wing building 16 by 16 feet, were commenced; they were completed during the year. During the month of August, 1879, a three-story 39 by 85 building was added to the old shop, and is now used as a shoe and tailor shop. During the month of October new water-closets were added to the shops, and prison buildings Nos. 2 and 3 were newly roofed and slated. During the months of November and December, 1879, a new boiler-house 30 by 36 feet, one story high, was built, and two new boilers set and connections made. In the month of February, 1880, two two-story cottages for clerks, 20 by 30 feet, with L 8 by 14 feet, with one-story wing 20 by 18 feet, were commenced and finished during the fiscal year. An addition 19 by 40 feet, one story and basement, was made to the governor's quarters during the months of April and May, 1880. An extension of prison building No. 1, 19 feet 6 inches by 40 feet, three stories high, and prison building No. 2, 19 feet 6 inches by 39 feet, three stories and basement, were commenced and completed during the months of May and June. There was also built during the month of June an extension to the workshop 50 by 39 feet, three stories high; also a lime-house 16 by 18 feet. Besides these improvements there has been 319 feet of prison wall built during the year, making a total of 1,836 feet completed. Work in the different shops has been very successfully carried on. During the year 1,915 barrack chairs were manufactured, crated, and shipped to the different posts; 65,000 tent pins have been made for the use of the Army, also 15 field desks for the Ute expedition; but this represents only a small portion of the work done in the carpenter shop—all the doors, sash, &c., used were made.

There were manufactured in the shoe shop 25,225 pairs of boots, brass screwed, and 100 pairs hand sewed; also 31,358 pairs of shoes, brass

screwed, and 100 pairs hand sewed. In this department care has been taken to save all the scrap leather and cuttings; 11,222 pounds have been sold, realizing the sum of \$285.70, which amount has been turned into the United States Treasury on account of miscellaneous receipts.

During the past season the prison farm yielded 3,700 bushels of potatoes, 6,000 heads of cabbage, 1,000 bushels of corn, 680 bushels of turnips, 260 bushels of onions, 1,000 bushels of tomatoes, and a sufficient quantity of other vegetables for immediate consumption. This year we have under cultivation as a prison farm about 50 acres, planted as follows, viz, 35 acres with potatoes, 3 with cabbage, 6 with corn, the remaining 6 acres with other vegetables, such as onions, beets, turnips, &c. The crops look well, and promise a good yield. All the work appertaining to the farm has been done by prison labor.

During the fiscal year there have been 4,218 bushels of lime burned and used in the building of the wall, prison-building extensions, sanitary purposes, &c.

It affords me great pleasure to be able to report that the conduct of the prisoners, on the whole, has been very good, and that severe disciplinary measures have seldom had to be resorted to. Ten prisoners escaped during the year; two were recaptured, making a loss by escape of eight.

The health of the institution has also been good, no deaths occurring during the fiscal year, as will be seen from the surgeon's report. The embarrassments heretofore existing on account of the crowded condition of everything, have been removed, and the sanitary condition of the prison excellent.

There is a fund of \$6,730.42 on hand (deposited in First National Bank, Leavenworth, Kan.), the accumulation of earnings of prison labor. The fund has not been increased to any great extent during the fiscal year, owing to the fact that the Quartermaster's Department has failed to pay for the prison labor furnished it. Attention is invited to statement of unpaid labor performed for the Quartermaster's Department during the fiscal year 1880.

It will be seen from the following statement the amount of prison appropriation received and expended:

Appropriated .....	\$67,440 00
Expended:	
Subsistence .....	\$16,662 94
Illuminating .....	944 89
Fuel .....	5,009 00
Tobacco .....	399 99
Clerical services .....	2,889 96
New boilers .....	2,270 15
Medical supplies .....	500 00
Books for library .....	500 00
Advertising .....	16 00
Hay for bedding .....	151 60
Stationery .....	449 89
Clothing at discharge .....	761 26
Donations at discharge .....	1,310 09
Apprehension of prisoners .....	90 00
Tools, materials, and miscellaneous stores .....	4,823 77
Stone for coping of wall .....	130 40
New machinery .....	2,150 16
Extension of steam heating .....	582 83
Extra pay to guard .....	388 00
Hire of foremen and watchman .....	6,756 67
New buildings and repair labor .....	3,753 62
New building materials .....	16,895 96
	<hr/> 67,440 00



I wish to call attention to the fact that a considerable portion of the appropriation has been expended in permanent improvements, machinery, &c., and if all the labor performed by prisoners had been paid for at the established rate, it would be found that during the past year the prison would have been nearly self-supporting.

I desire to take this opportunity to acknowledge my sincere thanks to the department commander for his kind encouragement and substantial support which he has extended to me during the past year, and I am sure that whatever success has attended my labors here has been largely due to the aid he has given me in the performance of my duties.

It is also gratifying to me to acknowledge my obligations to the different officers on duty at the prison for the manifest interest they have taken in the performance of their arduous duties, their hearty co-operation, and exemplary conduct.

I am, sir, very respectfully, your obedient servant,  
A. P. BLUNT,  
Brevet Colonel, U. S. Army, Governor.

The ADJUTANT-GENERAL OF THE ARMY,  
(Through Headquarters Department of the Missouri.)

REPORT ON EDUCATION IN THE ARMY.

WASHINGTON, D. C.,  
November 5, 1880.

SIR: I have the honor to render my annual report for the current year on the subject of Education in the Army.

Since the promulgation of General Orders No. 24, Headquarters of the Army, Adjutant-General's Office, May 18, 1878, the construction of buildings for school and religious purposes was authorized by the honorable Secretary of War as follows:

Posts.	Designation.	Estimated cost.
Little Rock, Ark.....	Reading-room.....	\$1,000 00
Fort Wingate, N. M.....	Reading-room, &c.....	572 00
Fort Monroe, Va.....	School-room, &c.....	3,000 00
Fort Walla Walla, Wash.....	School-house.....	300 00
Fort Washakie, Wyo.....	School-room.....	2,440 00
Fort Bayard, N. M.....	Reading-room, &c.....	707 00
Fort Townsend, Wash.....	School-house, &c.....	983 00
Fort Keogh, Mont.....	School-room, &c.....	548 00
Fort McHenry, Md.....	Reading-room, &c.....	1,350 00
Fort Grant, Ariz.....	do.....	1,500 00
Fort Meade, D. T.....	do.....	958 00
Fort Mackinac, Mich.....	do.....	1,200 00
Fort Brady, Mich.....	School-room, &c.....	1,000 00
Fort Reno, Ind. T.....	do.....	775 00
Fort Preble, Me.....	School-house, &c.....	1,546 00
Fort Hall, Idaho.....	do.....	1,000 00
Presidio, Cal.....	do.....	1,589 00
Fort Bowie, Ariz.....	do.....	977 00
Fort Verde, Ariz.....	do.....	1,500 00
Camp Huachuca, Ariz.....	School house.....	236 00
Fort Elliott, Tex.....	School-room, &c.....	1,090 00
Fort Brown, Tex.....	School and library.....	1,500 00
Fort Boise, Idaho.....	do.....	1,355 00
Fort Marcy, N. M.....	School house.....	800 00
Fort Coeur d'Alene, Idaho.....	Chapel, school, and library.....	1,500 00
Fort Halleck, Nev.....	School, reading-room, and library.....	404 84
Fort Sisseton, M. T.....	School-house.....	375 00
Fort Custer, M. T.....	Chapel and reading-room.....	1,179 00
Fort Supply, Ind. T.....	Chapel, school, and reading room.....	2,323 00



The following exhibit shows the average number of pupils who attended the schools in operation at military posts during the year:

Posts.	Enlisted men.	Children.	Total.
Fort A. Lincoln, D. T.	40	26	66
Fort Adams, R. I.	27		27
Alcatraz Island, Cal.	16	9	25
Angel Island, Cal.		19	19
Atlanta, Ga.			
Fort Barrancas, Fla.		9	9
Fort Bayard, N. M.	10	12	22
Fort Bowie, Ariz.		7	7
Fort Brown, Tex.	5	12	17
Fort Buford, D. T.	26	30	56
Fort Cameron, Utah	8	17	25
Fort Canby, W. T.		6	6
Fort Clark, Tex.		80	80
Fort Coeur d'Alene, Idaho		7	7
Columbus Barracks, Ohio	10	19	29
Fort Concho, Tex.	70	35	105
Fort Custer, M. T.		25	25
David's Island, N. Y.	40	9	49
Fort Davis, Tex.		13	13
Fort Douglas, Utah	6	28	34
Fort Duncan, Tex.	45	10	55
Fort Fred. Steele, W. T.		29	29
Fort Garland, Colo.			
Fort Gaston, Cal.	3	8	11
Fort Hale, D. T.		16	16
Fort Halleck, Nev.	13	14	27
Fort Hamilton, N. Y.	14	27	41
Fort Harney, Oreg.	8	10	18
Jefferson Barracks, Mo.	21	33	54
Fort Klamath, Oreg.		8	8
Fort Lapwai, Idaho		11	11
Fort Laramie, Wyo.	9	29	38
Fort Leavenworth, Kans.	10	25	35
Fort Lewis, Colo.	14	5	19
Fort Columbus, N. Y.	60	22	82
Little Rock, Ark.	9		9
Fort Logan, M. T.		8	8
Fort Lyon, Colo.		6	6
Fort Mackinac, Mich.	14	8	22
Madison Barracks, N. Y.	4	8	12
Fort McHenry, Md.		10	10
Fort McPherson, Nebr.	8		8
Fort Meade, D. T.	30	30	60
Fort Missoula, M. T.	10		10
Fort Monroe, Va.	40	82	122
Newport Barracks, Ky.		9	9
Fort Lowell, Ariz.	10	7	17
Fort Niagara, N. Y.	10	10	20
Fort Omaha, Nebr.	29		29
Fort Ontario, N. Y.	10		10
Fort Pembina, D. T.	19		19
Plattsburg Barracks, N. Y.	17	15	32
Fort Preble, Me.	11	12	23
Presidio, Cal.		17	17
Fort Point, Cal.		14	14
Fort Randall, D. T.	20	33	53
Fort Reno, Ind. T.		17	17
Fort Riley, Kans.	1	10	11
Fort Ringgold, Tex.	2	35	37
San Diego, Tex.		4	4
Fort Shaw, M. T.		12	12
Camp Sheridan, Nebr.	15	4	19
Fort Sill, Ind. T.	15	24	39
Fort Sisseton, D. T.	9	3	12
Fort Stanton, N. M.	13	2	15
Fort Stevenson, D. T.	6	6	12
Fort Stockton, Tex.	60	2	62
Fort Sully, D. T.	10	21	31
Fort Totten, D. T.	11	12	23
Fort Townsend, Wyo.		5	5
Fort Trumbull, Conn.	1	9	10
Fort Vancouver, W. T.	14	34	48
Fort Wadsworth, N. Y.	12	13	25
Fort Warren, Mass.	4	15	19
Fort Washakie, Wyo.	17	6	23
West Point, N. Y.	31	168	199
Wilket's Point, N. Y.		40	40
Fort Wingate, N. M.	10	17	27
Fort Yates, D. T.	20	20	40
Total	947	1,358	2,305

I have the honor to call the attention of the Honorable Secretary of War to the difficulties met with in obtaining competent teachers for the post schools from the enlisted men of the Army. A soldier detailed for teacher in the post schools now only receives thirty-five cents per diem extra pay, and is subject to all military duty—garrison and field—or such duties as may be prescribed by his post commander; and we have numerous instances where teachers have been taken out of the schools and sent to the field with their companies, in which case the schools were broken up until other teachers could be supplied; this necessarily causes much inconvenience, loss of time, and almost destroys the interest which should characterize the subject of education in the Army; and it is respectfully recommended that a law be passed by Congress *authorizing the enlistment into the Army of the United States of one hundred and fifty competent young men, to be rated as schoolmasters, with the rank and pay of commissary sergeant.* Should this recommendation become a law, there will be no difficulty in obtaining competent men as teachers, and good and efficient schools will be maintained at each of our military posts. In addition to his other duties the schoolmaster can take charge of the post library, and become responsible to his commanding officer for the school and library property.

I am, sir, very respectfully, your obedient servant,  
A. McD. McCOOK,  
*Colonel and Aide-de-Camp, in charge of Education in the Army.*

The SECRETARY OF WAR,  
Washington, D. C. •

REPORT OF THE JUDGE-ADVOCATE-GENERAL.

WAR DEPARTMENT,  
BUREAU OF MILITARY JUSTICE,  
November 1, 1880.

SIR: In compliance with circular of August 25 last, I have the honor to furnish the following report of the business of this bureau for the year between October 1, 1879, and October 1, 1880 :

Number of general court-martial records received, reviewed, and registered...	1,543
Number of reports made and opinions furnished upon court-martial proceedings, applications for remission of sentence, &c., and upon the miscellaneous questions of law referred to the Judge-Advocate-General for opinion by the Secretary of War.....	1,055
Number of official applications from the War and Treasury Departments and Pension Office for abstracts of proceedings of trials, &c., answered .....	1,105
Copies of records furnished under the 114th Article of War, &c., pages.....	13,510

The following schedule exhibits the number of convictions in the Army of the offenses indicated, as shown by the records of general courts-martial received at the bureau during the past year :

For absence without leave .....	229
For advising soldier to desert.....	3
For allowing prisoner to escape.....	10
For assault and battery.....	62
For assault with intent to kill .....	1
For breach of arrest.....	19
For desertion .....	405
For disobedience of orders.....	82
For disrespect to superior officer .....	21

For drunkenness .....	111
For drunkenness on duty .....	157
For embezzlement, &c.....	6
For failure to attend drill, roll-call, &c.....	69
For larceny .....	123
For mutiny and mutinous conduct .....	9
For neglect of duty .....	50
For presenting fraudulent claim .....	2
For offering violence to superior officer .....	11
For quitting guard or post as sentinel.....	64
For quitting platoon or division without leave.....	1
For selling, losing, or wasting government property .....	92
For sleeping on post.....	41
For "conduct unbecoming an officer and a gentleman" (not included under previous heads) .....	13
For disorders, &c., charged as "conduct prejudicial to good order and military discipline" (not included under previous heads).....	44
For miscellaneous (not included under any previous head).....	19

The following table shows the number of trials of officers and enlisted men in the different military departments of the Army, as it appears from the records received during the past year:

Department of Arizona:	
Officers .....	4
Enlisted men.....	87
Department of California:	
Officer .....	1
Enlisted men.....	159
Department of the Columbia:	
Officers .....	5
Enlisted men.....	97
Department of Dakota:	
Officers .....	2
Enlisted men.....	255
Department of the East:	
Officers .....	3
Enlisted men.....	119
Department of the Gulf:	
Enlisted men.....	13
Department of the Missouri:	
Officers .....	8
Enlisted men.....	154
Department of the Platte:	
Officers .....	2
Enlisted men.....	207
Department of the South:	
Enlisted men.....	22
Department of Texas:	
Officers .....	10
Enlisted men.....	250
Department of West Point:	
Cadets .....	5
Enlisted men.....	18

Also the following trials by general courts convened by order of the Secretary of War and General of the Army:

At Columbus, Ohio:	
Officer .....	1
Enlisted men.....	69
At David's Island, N. Y.:	
Enlisted men.....	17
At Fort Whipple, Va.:	
Enlisted men.....	3
At Jefferson Barracks, Mo.:	
Enlisted men.....	25
At Willets Point, N. Y.:	
Enlisted men.....	3

The following number of records of trials of enlisted men by inferior courts-martial have been received and filed at the different military departments during the past year, as appears from reports of judge-advocates received:

Department of California.....	904
Department of Dakota .....	1,706
Department of the East .....	1,168
Department of the Missouri.....	978
Department of the Platte.....	1,469
Department of the South .....	482
Department of Texas .....	1,526
Total .....	8,233

I take pleasure in bearing testimony to the constant and valuable work accomplished by my assistants, as well as by the clerks and other persons employed at the bureau during the year. The officers of the corps of judge-advocates not on duty at the bureau have performed their varied and important duties with their usual efficiency. Herewith are submitted extracts from the reports of judge-advocates and acting judge-advocates of the several geographical military departments, and your attention is respectfully called thereto. It is much to be regretted that this class of officers cannot be furnished in all cases with suitable libraries of legal works of reference, to be kept at the department headquarters. Frequently called upon, as they are, in the course of their duties, to examine the statute law and rulings of the courts of the States and Territories included in their departments, to advise upon questions of law arising in the administration of the department commands, to prepare military charges and conduct military prosecutions, as well as occasionally to assist in the preparation of cases for trial or in the defences to be made by officers sued or prosecuted in the civil tribunals, these judge-advocates should, it is deemed manifest, be furnished with a selection of legal treatises, reports, and statutes for reference and study; and to deny or unreasonably restrict them in this respect is both unjust to themselves as skilled and faithful officials and prejudicial to the interests of the military service. Such a course may also induce an unnecessary public expense in the retaining and paying of lawyers in cases where the services required might be as well performed by the judge-advocates, were they supplied with the necessary tools of their profession. Moreover, in the progress of civilization, the ancient maxim, "*Inter arma silent leges*," is no longer true, and in time of peace, officers whose specialty it is to study and be prepared to give reliable advice on all legal questions arising in the military service in war as well as in peace, should be provided, as are officers of other departments, with facilities for perfecting themselves in their specialty. In view of these considerations, applications for an appropriation for the purchase of law libraries for department headquarters have been repeatedly made by me and approved by the Secretary of War, and I repeat the recommendation with the hope that it will also meet your approval, and such an appropriation be recommended by you.

I would further repeat and urge the request contained in a former report, that the Secretary of War do recommend the establishing by Congress of a line of promotion in the corps of judge-advocates of the Army, the officers of which, by an unjust discrimination made against this alone of all the principal branches of the service, can now attain no rank higher than major—a rank which several of them have held for upwards of fifteen years without any promotion whatever, while discharging their duties with signal ability.

I have the pleasure of stating that my repeated recommendations of some declaratory legislation in reference to the military statute of limitations as applied to the crime of desertion received the approval of your predecessor and also of the President, as was expressed in his last annual message; and that a bill for this purpose passed the Senate at its last session, and that the Military Committee of the House of Representatives made a report to that body recommending its passage. I sincerely hope the bill will pass the House at the approaching session of Congress and become a law. I respectfully call the attention of the Secretary to the singular anomaly, dwelt upon by me in former reports, that while the prosecution of all other military crimes is admitted to be limited by the existing article to the period of two years therein prescribed, the crime of desertion has been heretofore held and treated by the majority of commanders in the Army to be practically unaffected by the limitation, so that a deserter may be brought to trial at any time after his offence, or, in other words, remain liable to arrest and punishment to the end of his life. Thus, under this doctrine and practice, a soldier of the war of 1812 who may have deserted and be still alive, may at any moment be apprehended, tried by court-martial, and sentenced to a term of imprisonment, though, by an exemplary and valuable life of more than half a century, he may have atoned over and over for the dereliction of his youth. In other words, he remains under a liability from which a soldier guilty of mutiny or cowardice in battle, or a civilian guilty of manslaughter, robbery, rape, arson, or high treason, is exempt under the existing law of the land. "Statutes of limitation," as observed by the United States Supreme Court, "rest upon sound policy and tend to the peace and welfare of society." Wharton remarks of them that they are "acts of amnesty and grace, to be liberally construed in favor of the defendant," and at the same time "checks imposed by the state itself to exact vigilant activity upon its subalterns." They are, indeed, found in all modern codes, as the expression not merely of an enlightened humanity, but of sound sense and practical policy; and for our *military* laws to exclude from their application any particular class of offenders against military discipline would seem to be unworthy the dignity of the government, as well as prejudicial to the interests of the military service, in inducing a lack of promptness and energy in the arrest and punishment of guilty persons. It is well known to the Secretary of War that it has always been held by the Judge-Advocate-General, (my predecessor in office, as well as myself,) that the existing military statute of limitations—the article of war above mentioned—is a *general* statute, applying to desertion in the same manner and to the same extent as to all other military offences, and that the same conclusion has been held and expressed by the honorable Attorney-General in three successive official opinions, and indeed publicly approved and adopted by the Secretary of War in a general order (No. 68) issued from the War Department in 1874. I do not propose, however, to contest here the opposite doctrine, above referred to, but in view of the fact that the same has been repeatedly pronounced against by the highest legal adviser of the government, and of the fact that, while the construction of the article remains thus in conflict, the due administration of military law must be constantly embarrassed, and injustice and oppression be not unfrequently wrought in individual cases. At present, indeed, when parties are brought to trial for desertions committed many years before, and sentenced, the President, upon the recommendation of the Judge-Advocate-General, in the majority of cases intervenes, through the Secretary of War, and, by the exercise of the pardoning power, sets free the prisoner. But this fact,



which forcibly illustrates the injustice and impolicy of such trials, shows also that the existing law or practice is most faulty in permitting the same to be had at all.

In conclusion, I would refer the Secretary of War to the very recent decision, (of which a copy of the portion referring to this subject is annexed,) of the United States district court for the southern district of New York, in the case of Thomas Davison, on *habeas corpus*, in which the views heretofore expressed by me and my predecessor in office, in regard to the subject of the limitation of prosecution in cases of desertion, are sustained most fully and explicitly and in every separate particular.

I would ask the attention of the Secretary of War to two defects in the existing articles of war, which, though heretofore brought to the consideration of Congress, remain as yet without correction. One of these is the employment in article seventy-two of the word "general" before "officers," in prescribing by what officers the superior courts-martial may be convened. By the use of this word the article incapacitates any officer below the rank of general—a colonel, for example—who is in command of a military department, from ordering such a court. It is my opinion that *all* department commanders, of whatever rank, should be invested with the same authority in this particular, and accordingly that the word "general" in the first line of the article should be struck out by legislation. The provision, as it now stands, has in several instances caused very considerable embarrassment in the administration of military justice. The other defect had in view is in the framing of the present one hundred and fourth article, which in terms precludes the execution of a sentence of court-martial except where the "whole proceedings" of the same have been approved by the reviewing officer. This term has been construed in practice to mean the material proceedings, *i. e.*, the proceedings material to the legal validity of the sentence or punishment approved. The article, however, as worded, is likely to mislead, and should properly be modified.

The seventy-fourth Article of War in the Revised Statutes provides that officers who may appoint a court-martial shall be competent to appoint a judge-advocate for the same.

Under this provision it is held that every garrison court-martial should now have an acting judge-advocate. Until recently, in practice, such courts were constituted with three officers only, the junior being designated as the recorder. The requirement for the detail of a fourth officer is found to be attended with much inconvenience, from the fact that many of our garrisons are quite small, and do not furnish enough officers available for the purpose. This want can only be remedied by legislation, and it is thought that the occasion suggests the expediency of a still further improvement of the law relating to inferior courts-martial.

The eighty-second Article of War, providing for garrison courts, limits the authority for their appointment to officers commanding posts or places where the troops consist of different corps, so that the commander of a post garrisoned by five or six companies of infantry or of cavalry or artillery only, as the case may be, could not appoint a garrison court, but the commander of a post having but two companies can do so, provided he has a single soldier of another corps or arm of the service, as, for instance, a hospital steward, or an ordnance sergeant. It is apparent that this distinction is an entirely artificial one which should be abolished.

A draft of a bill for this purpose will be submitted for your consideration.

In previous reports I have called the attention of the Secretary of War to the advisability of the enactment of an additional article of war



prohibiting gambling in the Army and enforcing the prohibition by appropriate punishments. Attention is again called to this subject, not because I believe that gambling is on the increase in the Army, for, on the contrary, I believe the practice is less prevalent now than it has been for many years, if not less than it has ever been before, but because I am so impressed with the evils growing out of the practice, even in its diminished prevalence, that I think it should not be tolerated at all, but should be driven out of the Army, as duelling has been, by an article of war placing it in a high category of military crimes. The law, out of considerations of public policy, will not permit the pay of an officer or soldier to be attached for the payment of a private debt, no matter how sacred may be the consideration on which the debt is founded, but the gambler's code enforces the payment of the so-called "debts of honor" with merciless exaction. The cases are not too rare in the Army where, after an officer has, perhaps through the superior proficiency of his adversary in gambling games, unfairly lost his money, he has also in like manner lost his pay-rolls for months in advance, and been thus deprived of the means provided by his government for the support of himself and his family while he is intrusted with the performance of important duties. An officer thus embarrassed is unfitted for the proper discharge of his duties; and that one occasionally should be driven by his necessities to resort to criminal methods of procuring means of support, resulting in his disgraceful dismissal from the Army, is more a matter of sorrow than surprise.

Your attention is called to the following extract from a report made by the Military Committee of the Senate to that body at its last session on a bill "To make an additional article of war":

This bill was fully considered by the committee during the last Congress and was favorably reported to the Senate. They have found no occasion to qualify the views then expressed. The additional article proposed prohibits "gambling, or the playing at cards or other games for money or other valuable stake, or the frequenting of gambling resorts," and it is so framed and the penalties are so adjusted that it is believed the measure would be found practical and a salutary measure of reform. There can be no doubt that the vice which the bill seeks to suppress is extremely prejudicial to the interests of the service, as well as injurious to the individual character and standing of the officers and soldiers engaged in it. The subject is deemed a proper one for legislation.

\* \* \* \* \*

Should some such bill as the one so reported to the Senate become a law and be administered with an earnest purpose to make it effectual, the result would undoubtedly be most beneficial. Hoping that you may concur in these views, I respectfully request that you will give them your express approval.

A "Digest of Opinions of the Judge-Advocate-General of the Army, with notes, by Brevet Col. W. Winthrop," published by the authority of the Secretary of War, has recently been printed at the Government Printing Office. As the notes refer to all decisions of the Supreme Court of the United States and of the Court of Claims, and also to important decisions of State courts, and likewise to the opinions of the Attorneys-General, on matters relating to military administration, he trusts the volume will prove useful to the service and valuable, as a book of reference, to the Secretary in the administration of the multifarious affairs of his department.

Respectfully submitted.

W. M. DUNN,  
*Judge-Advocate-General.*

HON. ALEXANDER RAMSEY,  
*Secretary of War.*

## REPORT OF THE QUARTERMASTER-GENERAL.

WAR DEPARTMENT,  
QUARTERMASTER-GENERAL'S OFFICE,  
*September 30, 1880.*

SIR: I have the honor to submit the annual report of operations of the Quartermaster's Department during the fiscal year ending June 30, 1880.

The balance at end of June 30, 1879, in Treasury to credit of the Quartermaster's Department was, as by last report .....	\$1,219,701 13
The appropriations made for the service of the Quartermaster's Department during the fiscal year were, in gross .....	11,310,300 00
Appropriations for deficiency for 1879 and prior years .....	115,840 21
Amounts deposited to credit of appropriations and received from sales to officers of public property .....	446,964 50
<b>Total .....</b>	<b>13,092,805 84</b>
Remittances to disbursing officers have amounted to...	\$11,110,764 28
Requisitions to pay settlements made by the Treasury..	281,166 81
Carried to surplus fund, act June 30, 1874 .....	673,059 07
	<hr/> 12,064,990 16 <hr/>
Balance in Treasury undrawn at end of June 30, 1880 .....	1,027,815 68

A table accompanying this report gives the amount of the various items of appropriations, remittances, &c., in detail.

A table is also with this report, giving the annual appropriations and annual expenditures for the Quartermaster's Department for each fiscal year since 1st of July, 1871.

Referring to this table for details, I note here that the expenditures have been as follows:

In the year ending June 30, 1872 .....	\$12,722,116 98
In the year ending June 30, 1873 .....	13,851,215 04
In the year ending June 30, 1874 .....	14,558,317 01
In the year ending June 30, 1875 .....	12,570,392 92
In the year ending June 30, 1876 .....	12,546,691 65
In the year ending June 30, 1877 .....	12,235,295 39
In the year ending June 30, 1878 .....	10,754,321 44
In the year ending June 30, 1879 .....	10,828,259 10
In the year ending June 30, 1880, and in the hands of officers.....	10,866,680 44

The Quartermaster's Department is charged with the duty of providing the means of transportation by land and water for all troops and all material of war. It furnishes the horses of the artillery and cavalry, and horses and mules for the trains. It provides and distributes clothing, tents, camp and garrison equipage, forage, lumber, and all material for camps and for shelter of troops and stores. It builds barracks, storehouses, hospitals; provides wagons and ambulances and harness, except for cavalry and artillery horses; builds or chartered ships, steamers, and boats, docks, and wharves; constructs and repairs roads, railways, and bridges; clears out obstructions in rivers and harbors when necessary for military purposes; provides, by hire or purchase, grounds for military encampments and buildings; pays generally all expenses of military operations not by law assigned to some other department; and, finally, it provides and maintains military cemeteries in which the dead of the Army are buried.

Food, arms, ammunition, medical and hospital stores are purchased and issued by other departments, but the Quartermaster's Department transports them to the place of issue and provides storehouses for their preservation until consumed.

About two hundred officers of the line in each fiscal year are placed on duty as acting assistant quartermasters, and are charged with the responsibility for public property, and many of them with the disbursement of public funds. A list of those to whom money has been remitted, or who have acted as assistant quartermasters during the fiscal year, is with this report.

For the responsibility thus involved, and the labor attending these duties, it seems to be just that they should be allowed by the government the same moderate monthly compensation which is allowed to acting commissaries of subsistence for duties somewhat similar, viz, \$10 per month.

The want of post quartermaster sergeants still continues to be felt, and I am requested by officers who have the good of the service at heart to again recommend that their appointment be provided for.

The acting assistant quartermaster who is in charge of the military property of the Quartermaster's Department at any military post, as a rule, leaves the post whenever the garrison is exchanged or removed, and the sudden transfer of property, often of great value, is attended with risk of loss to the officers.

A post quartermaster sergeant, who would remain at the post, would be able to save officers and the government loss which results from such sudden and frequent changes. This care of supplies would prevent useless transportation and wastage.

The value of the service of ordnance and commissary sergeants is well established by experience, but the quartermaster's department, whose property at military posts generally exceeds in value all others combined, is without these useful non-commissioned officers.

#### DUTIES OF OFFICERS.

Col. Stewart Van Vliet has been on duty in this office in charge of the inspection branch and as inspector.

Lieut. Col. S. B. Holabird has had charge of the finance branch and of the examination of accounts and returns of officers preparatory to their being transmitted to the Treasury for settlement, and of the supply and distribution and manufacture of clothing and camp and garrison equipage. He assumed these duties on November 10, 1879, prior to which Lieut. Col. J. D. Bingham was in charge of them.

Lieut. Col. H. C. Hodges has had charge of the transportation, regular supplies, and miscellaneous claims branches of the office.

Maj. J. M. Moore has had charge of the claims branch and of the barracks and quarters branch of the office.

Capt. A. F. Rockwell has had charge of the maintenance and improvement of the national military cemeteries, and has also done the duty of depot quartermaster at this station.

Other principal regular stations have been occupied as follows :

Col. D. H. Rucker, assistant quartermaster-general, has been in charge of the Philadelphia general depot of the Quartermaster's Department, the principal depot for purchase and manufacture of clothing for the Army.

Col. Rufus Ingalls, assistant quartermaster-general, chief quartermaster of Military Division of the Missouri, Chicago, Ill., and to July 31, 1879, also depot quartermaster at that station.

Col. L. C. Easton, assistant quartermaster-general, has been in charge of the general depot of the Quartermaster's Department at New York City.

Lieut. Col. S. B. Holabird, deputy quartermaster-general, chief quartermaster Military Division of the Pacific and Department of California, at Presidio of San Francisco, Cal., until October 15, 1879.

Lieut. Col. Chas. H. Tompkins, deputy quartermaster-general, chief quartermaster Department of Dakota, Saint Paul, Minn.

Lieut. Col. James A. Ekin, deputy quartermaster-general, in charge of the general depot of the Quartermaster's Department at Jeffersonville, Ind., disbursing officer of the Quartermaster's Department at Louisville, Ky., and in charge of the national military cemeteries in Kentucky and Tennessee, and of investigation of claims in Kentucky, Tennessee, Ohio, and Indiana.

Lieut. Col. Rufus Saxton, deputy quartermaster-general, chief quartermaster Department of the Missouri, Fort Leavenworth, Kans., until October 15, 1879, and since Nov. 1, 1879, chief quartermaster Military Division of the Pacific and Department of California, at Presidio of San Francisco, Cal.

Lieut. Col. J. D. Bingham, deputy quartermaster-general until October 15, 1879, on duty in the Quartermaster-General's Office, and since October 19, 1879, chief quartermaster Department of the Missouri, Fort Leavenworth, Kans.

Lieut. Col. A. J. Perry, deputy quartermaster-general, chief quartermaster Military Division of the Atlantic and Department of the East, Governor's Island, New York Harbor.

Lieut. Col. John G. Chandler, deputy quartermaster-general, chief quartermaster Department of the South, at Newport Barracks, Ky.

Maj. William Myers, quartermaster, depot quartermaster, Chicago, Ill.

Maj. C. G. Sawtelle, quartermaster, chief quartermaster Department of the Columbia, at Vancouver Barracks, Washington Territory.

Maj. James J. Dana, quartermaster, chief quartermaster District of New Mexico, at Santa Fé, N. Mex.

Maj. R. N. Batchelder, quartermaster in charge of the general depot of the Quartermaster's Department at San Francisco, Cal.

Maj. M. I. Ludington, quartermaster, chief quartermaster Department of the Platte, at Omaha, Nebr.

Maj. B. C. Card, quartermaster, chief quartermaster Department of Texas, San Antonio, Tex.

Maj. C. A. Reynolds, quartermaster, disbursing quartermaster at Buffalo, N. Y.

Maj. George B. Dandy, quartermaster, purchasing and shipping quartermaster at Portland, Oreg.

Maj. George H. Weeks, quartermaster, chief quartermaster Department of Arizona, at Prescott, Ariz.; also depot and disbursing quartermaster at Whipple Depot, Ariz.

Maj. William B. Hughes, quartermaster, depot quartermaster at Saint Louis, Mo.

Maj. A. G. Robinson, quartermaster, disbursing quartermaster District of Montana, at Helena, Mont.

Major E. D. Baker, quartermaster, until October 16, 1879, depot quartermaster at Bismarck, Dak., and since December 17, 1879, depot quartermaster at San Antonio, Tex.

#### INSPECTION BRANCH.

This branch of the office reports the stations and duties of the officers of the Quartermaster's Department, and those of the line officers and officers of other branches of the staff on duty in the Quartermaster's Department as acting assistant quartermasters.

Two hundred and eighty-two have been on such duty for longer or shorter periods during the year. A list of their names and stations accompanies this report.

It prepares the monthly returns of officers of the Quartermaster's Department for the Adjutant-General's Office. It files and examines the annual reports of officers; files and distributes General and Special Orders, rolls of honor, and other printed documents relating to the Quartermaster's Department. It attends to the procuring and distributing to military posts the reading-matter furnished to them in connection with the system of military schools and instruction of soldiers and of their children. This reading-matter consists principally of the current periodical literature of the day, for which, however, when desired by the post, a supply of school-books is occasionally substituted. The total expenditure to supply the schools with reading-matter during the year has been about \$6,000.

Ninety-three thousand two hundred general orders and other printed papers have been received, and sixty-nine thousand five hundred sent out during the year.

#### SCHOOL-HOUSES.

During the year authority has been given, under the act of 28th July, 1866 (Revised Statutes sec. 1231), and in pursuance of the policy inaugurated by Secretary McCrary of encouraging education in the Army, for the erection of 27 school-houses at 27 different military posts, as follows:

	Cost.
• New Camp Grant, Ariz .....	\$1,500 00
Camp Huachuac, Ariz .....	236 00
Fort Verde, Ariz .....	1,500 00
Fort Bowie, Ariz .....	977 00
Fort Halleck, Nev .....	404 00
Fort Hall, Idaho .....	675 00
Presidio, Cal .....	1,590 00
Fort Boise, Idaho .....	1,355 00
Fort Cœur d'Alène, Idaho .....	1,500 00
Fort Townsend, Wash .....	983 00
Fort Vancouver, Wash .....	1,788 00
Fort Marcy, N. Mex .....	800 00
Fort Wingate, N. Mex .....	572 00
Fort Supply, Idaho .....	2,323 00
Fort Baker, Mont .....	1,101 00
Fort Meade, Dak .....	958 00
Fort Keogh, Mont .....	548 00
Fort Custer, Mont .....	1,180 00
Fort Totten, Dak .....	520 00
Fort Sisseton, Dak .....	375 00
Fort Brown, Tex .....	1,500 00
Fort Reno, Idaho .....	774 00
Fort Elliott, Tex .....	1,090 00
Fort Preble, Me .....	1,545 00
Fort Brady, Mich .....	1,000 00
Fort Mackinac, Mich .....	1,200 00
Fort McHenry, Md .....	1,350 00
Total cost .....	29,401 00

The average cost of these buildings is \$1,089. Such schools are now in operation.

#### TRANSPORTATION.

The movement during the year was of 55,468 persons, 16,094 beasts, and 126,218 tons of material, the cost of which is reported at \$1,937,318.56,



of which \$410,673.62 was paid for transportation of persons, and \$1,526,644.94 for freight.

The larger movements of troops were—

First Cavalry, Company G, from Department of the Columbia to Department of California, 196 miles.

Fourth Cavalry, headquarters and Companies A, D, E, K, I, and M, from Department of Texas to Department of the Missouri, 1,435 miles.

Tenth Cavalry, Companies A, G, and I, from Department of the Missouri to Department of Texas, 963 miles.

First Infantry, headquarters and ten companies, from Department of Dakota to Department of Texas, 1,681 miles.

Sixth Infantry, headquarters and ten companies, from Department of Dakota to Department of the Missouri, 1,783 miles.

Seventh Infantry, Companies B, C, D, E, F, and K, from Department of Dakota to Department of the Missouri and back, 2,568 miles.

Eighth Infantry, Company F, from Department of Arizona to Department of California, 1,059 miles.

Thirteenth Infantry, headquarters and ten companies, from Department of the South to Department of the Missouri, 874 miles.

Twenty-second Infantry, Companies D, E, F, and K, from Department of the Missouri to Department of Texas, 849 miles.

Twenty-fifth Infantry, headquarters and ten companies, from Department of Texas to Department of Dakota, 1,963 miles.

#### RAILROAD TRANSPORTATION.

There were moved by rail 28,508 persons, 13,561 beasts, and 71,089 tons of materials and supplies. The cost to the appropriation for transportation of the Army is reported at \$264,580.20 for passengers and \$346,538.08 for stock and freight.

The value of the military transportation during the year by the bonded Pacific railroads was \$1,116,108.07, which, under the law of 7th May, 1878, the Secretary of the Treasury withholds and applies as directed in that law.

The value at full tariff rates of transportation over the land-grant railroads during the year is estimated at \$225,000.

The Court of Claims has decided in the case of the Atchison, Topeka and Santa Fé Railroad *vs.* United States, No. 11,471, December term, 1879, that 50 per cent. of ordinary rates is properly payable to these land-grant railroads for military transportation, but this compensation, under existing laws, can be secured only by suit in that court, brought by each railroad interested.

Thus the total value at tariff rates of service rendered to the War Department by railroads, including those subsidized and not subsidized, during the year is estimated at \$1,952,218.35, of which \$723,610.28 is payable in money, \$1,116,108.07 is to be withheld and applied by the Secretary of the Treasury, under the law of 7th May, 1878, and \$112,500 is to be retained absolutely and not paid or credited to land-grant railroads under the existing laws as interpreted by the courts.

#### BONDED PACIFIC RAILROADS.

No change has been made during the year in the legislation relative to the bonded Pacific railroads. With the report of the transportation branch of this office is an opinion of the Department of Justice upon a series of questions submitted by the Quartermaster-General to the Sec-



retary of War as to the effect of existing laws upon dealings of the War Department with these railroads. This opinion, since it was received, has governed the practice of the Quartermaster's Department.

The total earnings on account of military transportation of these railroads, from their first opening to 30th June, 1880, is stated as follows:

Names of companies.	Amount paid in cash.	Amount credited on bonds under act of July 2, 1864.	Amount withheld under act of March 3, 1873. (Rev. Stats. 5260.)	Amount withheld under act of May 7, 1878.	Total.
Union Pacific.....	\$1, 692, 630 75	\$1, 692, 630 94	\$3, 166, 390 31	\$408, 322 49	\$8, 959, 974 49
Central Pacific .....	261, 106 21	261, 106 29	625, 494 47	173, 569 54	1, 321, 376 51
Kansas Pacific .....	881, 008 85	881, 068 90	525, 695 24	.....	2, 287, 832 99
Sioux City and Pacific.....	3, 594 28	3, 594 29	27, 200 76	.....	34, 389 33
Total.....	2, 838, 400 09	2, 838, 400 42	4, 344, 780 78	581, 892 03	10, 603, 473 32

The following tables state the military transportation during the fiscal year on the several Pacific railroads named:

Names of companies.	No. of persons transported.	No. of animals transported.	Freight transported, lbs.
Union Pacific.....	8, 227	7, 892	53, 732, 386
Central Pacific .....	1, 449	574	6, 970, 415
Kansas Pacific.....	1, 740	1, 257	7, 024, 237
Sioux City and Pacific.....	1, 404	3	272, 297
Total .....	12, 820	9, 226	67, 989, 335

The cost of this service is stated as follows:

Names of companies.	Amount of accounts referred to Treasury for settlement.	Amount of accounts rendered and under examination July 1, 1880.	Estimated amount of accounts not yet rendered.	Total.
Union Pacific .....	\$113, 566 77	\$32, 474 72	\$505, 092 20	\$651, 133 69
Central Pacific.....	23, 313 01	150, 551 19	111, 099 28	284, 963 48
Kansas Pacific.....	10 90	.....	175, 000 00	175, 010 90
Sioux City and Pacific.....	.....	.....	5, 000 00	5, 000 00
Total .....	136, 890 68	183, 025 91	796, 191 48	1, 116, 108 07

The following is a statement of unsettled accounts with these railroads on 30th June, 1880, either in this office or in the Treasury Department, under adjustment:

Names of companies.	In Treasury.	In Quartermaster-General's Office.	Total.
Union Pacific.....	\$49, 484 72	\$189, 405 25	\$238, 889 97
Central Pacific .....	34, 753 26	303, 175 70	337, 928 96
Kansas Pacific .....	866 70	47, 906 69	48, 863 39
Total.....	85, 104 68	540, 577 64	625, 682 33

PAPERS ACCOMPANYING THE  
LAND-GRANT RAILROADS.

The debt of the United States to the land-grant railroads on account of the War Department is increasing. They are faithfully rendering service of the greatest value to the Army.

Payment by the War Department is forbidden by existing laws, and they are referred to the courts. Each railroad having an account against the War Department is required to bring suit in the Court of Claims.

The principles of settlement have been fixed and determined by the Supreme Court and by several decisions in the Court of Claims under the decision of the Supreme Court, all of which will be found stated in the report of the transportation branch of this office, herewith.

In the sundry civil bill of March 3, 1879, appropriation of \$300,000 was made to pay, so far as it would go, 50 per cent. of arrears of Army transportation to land-grant railroads. This appropriation has been exhausted, and considerable sums remain unpaid.

I have therefore submitted to the Secretary of War estimates for further appropriations on this account, based upon the payment of 50 per cent. of their earnings.

A general order of the War Department is being printed regulating the business of military transportation over land-grant and bonded railroads, and the adjustment of accounts therefor, in conformity with the latest legislation, decisions of courts, and opinions of the Department of Justice.

WAGON AND STAGE TRANSPORTATION.

On wagon-wheels the department moved, by contract or hire and by Army teams, 31,175 tons of military supplies. The cost of this work is reported at \$822,188.69.

Forty-five contracts for wagon transportation have been made and reported to this office.

Four thousand one hundred and ninety-two passengers and 29,438 pounds of stores have been moved by stage, costing \$86,263.65.

WATER TRANSPORTATION.

Twenty-two thousand seven hundred and sixty-eight persons, 2,533 beasts, and 23,940 tons of materials and supplies have been moved by water, at a cost of \$417,755.94. The work was done on established commercial lines of water transportation in part, in part by contract, and in part by vessels owned or chartered by the United States.

The following vessels are in service of the department: Side-wheel steamer Henry Smith, harbor boat, New York; propeller Ordnance, between New York and ordnance proving ground, Sandy Hook, N. J.; steam-tug Atlantic, ferry-boat between New York and Governor's Island; steam-tug Resolute, Boston Harbor boat; propeller General McPherson, San Francisco Harbor boat; steam-launches: Thayer, in Boston Harbor; Monroe, at Fortress Monroe; General Greene, at Fort McHenry, Md.; Hamilton, at the recruiting depot, David's Island, New York Harbor; General Jessup, at Fort Adams, Newport Harbor; Barrancas, Pensacola Harbor boat; stern-wheeler General Sherman, on the Upper Missouri River and the Yellowstone River; the schooner Matchless, at Key West, Fla.

The cost of maintenance and of running these vessels during the year has been \$100,874.69.

The Thayer being considered too small for the full service of Boston Harbor forts, the Resolute was purchased on 14th November, 1879, by order of the Secretary of War, at the cost of \$14,000. Necessary alterations and improvements made on her increased the total cost before going into service to \$17,947.46. She is 87.35 feet over all; 18.6 feet beam; 8 feet hold; tonnage, 73 tons; return tubular boiler, 7 feet by 12.5 feet in size; surface condensing engine, cylinder 20 by 20 inches.

The total expenditure for water transportation, as stated above, is \$417,755.94.

#### TRANSPORTATION ACCOUNTS AND CLAIMS.

One thousand four hundred and twenty-five accounts and claims for transportation have been adjusted in this office during the year, amounting to \$1,300,212.80; 1,219, amounting to \$1,007,452.43, were reported favorably for settlement; 118, amounting to \$169,959.51, were unfavorably reported and rejection recommended, and 88, amounting to \$122,800.86, were suspended for additional evidence; 317, amounting to \$607,235.04, were in this office unsettled at close of fiscal year.

#### INDEBTED RAILROADS. •

The railroads which at the close of the war purchased railroad material from the United States, excluding those whose debts had not been compromised under various special laws of Congress, and excluding two railroads declared insolvent, owed the United States, on 30th June, 1879, \$1,026,474.76. Interest and charges against the railroads during the year amount to \$42,631.49; payments by military transportation, to \$194.53; and the debt due on 30th June, 1880, was \$1,068,911.72.

In addition to the payments by military transportation, the sum of \$53,106.09 was received on account of the debt of the Nashville and Northwestern Railroad, under a judgment obtained against that company in 1876. This sum was specifically appropriated by Congress to settle this account, the postal earnings of the road, reserved by the Postmaster-General, having been carried into the surplus fund. The railroad still owes the Quartermaster's Department, from its postal earnings, \$2,475.83. The McMinnville and Manchester Railroad, on similar account, owes \$5,050.87. For these sums I understand, from the Auditor of the Treasury for the Post-Office Department, that appropriation will be asked of Congress in order to settle these accounts.

The amount found due the Mobile and Ohio Railroad Company by the accounting officers, payable out of the appropriation of \$300,000 for 50 per cent. of earnings of land-grant railroads, referred to in my last annual report, is still withheld by the Treasury, waiting settlement of the debt of that railroad for purchase of railroad material at the close of the war.

No progress has been made in settlement of the debts of the McMinnville and Manchester, the Edgefield and Kentucky, and the Memphis, Clarksville and Louisville Railroads.

Suit is pending against the McMinnville and Manchester Railroad in the circuit court of the United States for the middle district of Tennessee, but its condition is not known to this office.

The State of Tennessee is responsible for the debt of the Edgefield and Kentucky, and of the Memphis, Clarksville and Louisville Railroad, the officers of the State having executed, under specific legislative authority of the State, the bonds required at time of sale to secure the United States against loss. The State appears to take no action in the

matter, and letters to the governor have brought no replies. The debt is a just one, and the War Department holds the State's bond to secure it. It will be well to have suit brought in the Supreme Court to settle this debt incurred fifteen years since, upon which no payment is made.

REGULAR AND MISCELLANEOUS SUPPLIES.

*Animals.*—Two thousand and twenty-two cavalry and artillery horses were purchased during the year, costing \$237,375.47, an average per head of \$117.39. Some of these were delivered under contracts of the previous year, not completed on 30th June, and were paid for out of appropriation of previous year. The number of cavalry and artillery horses ordered to be purchased during the fiscal year ending 30th June, 1880, was 1,821, estimated to cost \$198,315.52. Of the 2,022 actually received, 161 were for Department of Dakota; 500 for Department of the Missouri; 659 for Department of the Platte; 149 for Department of California; 501 at Saint Louis Depot, Mo.; for various departments in the West. Two thousand two hundred and sixty-five mules and 47 draught horses were bought. The mules cost \$276,045.80, or \$121.87 per head; the horses \$7,575, or \$161.17 per head.

One thousand three hundred and thirty-seven horses, 751 mules, and 13 oxen were sold during the year. The horses brought \$50,844.38; the mules, \$25,122.02; the oxen, \$272.92; total, \$76,239.32, which is deposited in the Treasury to credit of miscellaneous receipts, except the small sum realized by sales of horses to officers.

The following is a summary of the number of animals purchased, sold, died, &c., during the fiscal year, and remaining on hand 30th June, 1880:

	On hand July 1, 1879.	Purchased.	Taken up, &c.	Total.	Sold.	Died.	Lost and stolen.	Total.	On hand June 30, 1880.
Horses .....	10,990	2,009	163	13,223	1,337	777	404	2,518	10,704
Mules .....	10,031	2,265	95	12,391	751	797	121	1,669	10,722
Oxen .....	43	.....	.....	43	13	1	.....	14	29

FUEL, FORAGE, AND STRAW.

Issues of fuel during the year: 108,074 cords of wood; 33,277 tons of coal. Of forage the issues were: 692,329 bushels of corn; 916,244 bushels of oats; 114,766 bushels of barley; 62,791 bushels bran; 55,907 tons of hay; 2,575 tons of straw, and 68 tons of fodder.

CONTRACTS.

There were filed in this office 691 contracts; 471 were for 22,831,284 pounds of corn, 26,260,907 pounds of oats, 4,113,000 pounds of barley, 367,900 pounds of bran, 99,822,860 pounds of hay, 4,805,222 pounds of straw, 91,059 cords of wood, 71,441,993 pounds of coal, and 1,669,200 pounds of chorcoal; 41 contracts for quantities not definitely limited; 3 for work upon national cemeteries; 32 for clothing, camp and garrison equipage; 5 for horses and mules; 3 for harness; 51 for transportation; 10 for buildings; 4 for stationery; 7 for wagons and ambulances; 17 for building-materials; 6 for veterinary supplies; 3 for miscellaneous services, and 38 leases.

## VEHICLES.

They were purchased 400 six-mule Army wagons; 240 two-horse wagons; 19 spring-wagons; 3 trucks, and 1 water-wagon. The six-mule wagons cost \$108 to \$119.75 each; the two-horse wagons \$102.40 each. Forty of the latter, purchased on the Pacific coast, cost \$149 each; 12 spring-wagons, bought in California, cost \$215 each.

Three wagon-gears, and 12 sets of wagon-wheels made entirely of iron, by the Davis Iron Wagon Company, of Elmira, N. Y., were purchased for trial, and have been sent West. Reports of their work have not yet been received, except as to one of the iron-wagon gears, which is not favorable.

No ambulances have been bought, the stock on hand having sufficed for all wants.

Seventy-five sets of six-mule wagon harness and 310 sets of four-mule ambulance harness were purchased by contract. The six-mule harness cost \$86.50 per set. The four-mule ambulance harness cost from \$51.50 to \$70.56 per set East, and \$69.50 per set in California.

Wheels with metallic hubs are being gradually introduced into the Army and give satisfaction, and conquer the prejudice which has so long delayed their general military use in this country.

On the 30th July, 1880, the manufacture of Army harness was transferred to the military prison at Fort Leavenworth, Kans.

## TRAVEAUX.

Traveaux, *i. e.*, ambulances consisting of two long poles with slings for sick and wounded men between them, the front ends of the poles being attached to a mule, the rear ends dragging on the ground, contrived in imitation of the Indian traveaux, by Surgeon Charles R. Greenleaf, U. S. A., were, on request of the army in Dakota, made and sent to the military posts for trial. Partial reports, not favorable to their use, have been received, but the question cannot be settled without further experience.

## STOVES.

Most of the stoves issued to the Army are now manufactured at the Rock Island arsenal. Seventy-four were made there during the year; 140 more were ordered in June, which will be delivered during the current fiscal year.

## VETERINARY SERVICE.

A full supply of veterinary instruments and medicines, under the new supply table, has been procured.

## EXPLORATIONS AND SURVEYS.

The Quartermaster's Department has furnished the usual aid and supplies to the survey under Lieutenant Wheeler, of the Corps of Engineers, and has also furnished miscellaneous supplies, to a considerable extent, to the Arctic Expedition known as that of Lieutenant Howgate, Twentieth Infantry, on duty at the Signal Office.

## CLAIMS UNDER ACT OF JULY 4, 1864.

Most of the claims filed under this law came from the States of Tennessee, Kentucky, Missouri, West Virginia, Maryland, Pennsylvania, Ohio, and Indiana, and from the District of Columbia.



By an act of 3d March, 1879, all claims under these laws not filed prior to the 1st January, 1880, are barred. This being the first statute of limitation for such claims, caused a very large number to be filed in the later months of 1879.

Among the claims filed under this statute were a large number of Morgan raid claims—claims presented to the State of Indiana for losses by her citizens during what is known as the Morgan raid. They have been, it is stated, examined and reported on by commissioners appointed by the State, who classified them as follows in their final report:

<i>Class I.</i> —For property taken under orders of United States officers, passed by the commission, amounting to .....	\$58,017 51
<i>Class II.</i> —For property taken under orders of State officers, passed by the commission .....	24,268 80
<i>Class III.</i> —For property taken by the enemy, and allowed by the commission .....	331,288 17
<i>Class IV.</i> —For property taken under orders of unknown persons .....	35 00

Total amount allowed by the commissioners of the State of Indiana 413,609 48

Of these claims, all of Class I probably come within the scope of the law of 4th July, 1864, and may be settled through this office, on sufficient proof being presented. Of Class II it is probable that some will, on examination, be found within the authority of this office, but not all. Of claims which would be embraced in Classes III and IV this office has no jurisdiction.

The report of the commission appointed by the State of Indiana merits the highest respect and consideration, but the task of investigating and reporting on claims under the act of 1864 is a duty imposed personally upon the Quartermaster-General, and he has no right to make a decision on any claim without first seeing the evidence relating to it, and cannot make report or decision under the law simply upon the verdict of the commission.

It has been stated that the commissioners kept a full record of the testimony in each case, upon which they acted, and without this testimony the Quartermaster-General is unable to decide in these cases. It has been repeatedly asked for, but thus far it has not been delivered to this office.

For further details on this subject, important to the claimants; I refer to the report of Maj. J. M. Moore, in charge of the claims branch of this office, which is herewith.

#### CLAIMS FILED BY THE STATE OF PENNSYLVANIA.

The authorities of Pennsylvania also filed on the 31st of December, 1879, a large number of claims by Mr. M. L. Shotwell, as agent for the auditor-general of the State. No abstract or list accompanied these claims, which filled two boxes and one package. Request was made by the Secretary of War for an abstract or list of the claims, and for full information in regard to the action of the State authorities thereon, and for copies of the acts of the State authorizing the appointment of a commission, and of the reports of the commission. On the 11th of August, 1880, the auditor-general of Pennsylvania advised the Quartermaster-General that the claims are nearly all for losses known as Border Raid claims, and some of a mixed nature not heard or assumed by the State, and that many claimants had protested against their removal from his office. He therefore requested their return. All have been returned, by authority of the Secretary of War, except 876, which are



for quartermaster's stores taken by the United States Army, and which had been then entered upon the register of claims in this office.

Many claims under act of 4th July, 1864, reached this office after the 31st December, 1879. All these are barred by the statute. They are filed away, recorded, and marked as barred, and the claimants or their agents have been advised that this office can take no action, and holds them subject to their orders. Up to 30th June, 1880, 351 claims barred by the statute were received, amounting to \$74,731.77.

The second section of the act of 16th June, 1880, entitled "An act for the allowance of certain claims reported by the accounting officers of the United States Treasury Department," requires that the agents appointed by the Quartermaster-General or by his subordinates to investigate claims under the act of 4th July, 1864, shall give notice to attorneys of the time and place of taking testimony, who shall have the right to cross-examine any witness testifying in behalf of the government, and that said agents shall take at the same time testimony of any and all witnesses presented by claimant, and that all such testimony shall be taken under the law and rules which usually govern the taking of testimony.

Upon requesting instructions as to the law of evidence, the Secretary of War advised the Quartermaster-General that "the rules which usually govern the taking of testimony are set forth in various treatises on the law of evidence. The work on this subject of most general acceptance is Greenleaf's Treatise, 3 vols., last edition," and that the best method of informing the officers and agents of the Quartermaster's Department in regard to their duty under this law will be to announce to them that "the law of evidence as set forth in Greenleaf (except in so far as the same may be done away with or modified by statute or authoritative judicial ruling) be followed and administered by the officer or agents investigating." Instructions to this effect have been sent to all officers engaged in the investigation of these claims, with orders to communicate them to the agents in their districts.

There were on file, on 30th June, 1879, and not finally acted on, 11,649 claims, for \$5,523,294. During the fiscal year there were filed, in addition to the above, 12,757, amounting to \$7,527,051.56. Total, 24,406 claims under the act of July 4, 1864, amounting to \$13,050,345.56. Five hundred and ninety-four were reported to the Third Auditor during the year, with recommendation for settlement at \$157,650.70, which was \$156,814.19 less than claimed, a reduction of about 50 per cent. Nine hundred and twenty-one claims were rejected, amounting to \$738,420.46. Thus 1,515 claims, amounting to \$1,052,885.35, were finally disposed of by this office during the year. Two thousand eight hundred and seventy-two claims not finally acted on had been investigated and prepared for the action of the Quartermaster-General at the end of the fiscal year. Thus 4,837 claims were, during the year, prepared for adjudication. The pressure of this and other duties prevented the Quartermaster-General from clearing his docket.

In the report of the claims branch of this office will be found a table showing the work done since the passage of the act of 1864.

The greatest number of claims filed in any one year is 13,217, filed in the fiscal year 1865-'66. Next to this is the work of 1879-'80, when, under the operation of the statute of limitations enacted in 1879, 12,757 claims were filed. In all, 53,505 claims for quartermaster's stores have been filed under the act of 1864. They amount to \$38,084,066.55; 30,614 of them have been decided by the Quartermaster-General, amounting to \$26,086,606.34; 10,499 have been reported for settlement, at \$4,301,583.65,

which is less than demanded by \$3,723,606.63; 20,115 have been adversely reported, amounting to \$18,061,416.06; 22,891 remain on hand not disposed of; they amount, as presented, to \$11,997,460.21. About half these claims come from Tennessee; about one-tenth are from each of the States of Kentucky, Missouri, West Virginia, and Maryland; one-sixteenth come from Pennsylvania and the District of Columbia, and the rest are from Indiana, Ohio, and Kansas, about 3½ per cent. of the whole. These proportions are but estimates. The claims have not been recorded with reference to States, and the bulk of the register is so great that it was found impossible, without long search and much expense and interruption to business, to classify them according to States. But the above estimates are believed to be approximately correct, and assuming them as correct enough for a basis for the calculation, it would follow that the claims from the different States amount to about the sums stated: From Tennessee, \$19,000,000; Kentucky, Missouri, West Virginia, and Maryland, each \$3,800,000; Pennsylvania and the District of Columbia, each \$1,270,000; Ohio, Indiana, and Kansas, collectively, \$1,270,000; and that the sums allowed and paid for quartermaster's stores under the act of 1864 have been distributed in the same proportion, as follows, viz: To claimants in Tennessee, \$2,151,000; in Kentucky, in Missouri, in West Virginia, and in Maryland, each \$430,000; in Pennsylvania and in the District of Columbia, each \$143,000; in Ohio, Indiana, and Kansas, collectively, \$143,000.

The great accumulation of these claims in the last year, consequent on the enactment of a statute of limitation, has shown the urgent necessity for an increase in the means of investigation. Congress passed, at the last session, a law requiring that the examination of witnesses should be conducted according to the established law of evidence. Claimants and witnesses are dying, and it yearly becomes more difficult to ascertain the truth in regard to these claims. There is no specific appropriation for investigating them. The expenses are paid from the appropriation for incidental expenses of the Army, which has found it difficult to meet them, and yet to provide for the charges which the military service throws upon it. But after consultation with the Secretary of War it has been determined to increase the number of agents, and to detail another officer specially to the duty of investigating claims originating in Tennessee. Maj. J. J. Dana, an officer of experience and judgment, has been accordingly detailed to this duty, and stationed at Nashville, and to him all claims to be investigated in Tennessee are referred. The cost of the investigation of these claims during the fiscal year was \$132,000. In connection with this business the claims branch of this office sent out 36,000 letters during the year, which gives some indication of the labor performed in this office in connection with claims under the act of 4th July, 1864.

#### MISCELLANEOUS CLAIMS AND ACCOUNTS.

On July 1, 1879, there were on file 12,513 miscellaneous claims, amounting to.....	\$6,901,271 63
And 391 accounts for .....	61,900 74
1,765 new ones were filed during the year, amounting to .....	523,666 93
Total amounts above noted.....	7,486,839 30

These are independent of and in addition to the claims under the act of 4th of July, 1864.

Seventy of these claims were passed for \$3,022.51, being \$1,505.31 less than their face.

One hundred and seventy-eight, amounting to \$29,497.02, were transmitted to the Third Auditor for action of the accounting officers of the Treasury.

Two hundred and fifty-one, amounting to \$245,150.57, were transmitted to other departments to which they pertained.

One hundred and forty-seven, amounting to \$83,702.02, were rejected.

Three hundred and thirty accounts, amounting to \$25,540.95, were approved, being \$177.44 less than their face.

Four hundred and eight accounts, for \$62,832.14, were transmitted to other departments to which they pertained.

Ten accounts, for \$1,035.34, were rejected. Total disposed of 1,394 claims and accounts, amounting, as presented, to \$452,463.30.

Twelve thousand nine hundred and eleven miscellaneous claims and 364 accounts remain on file, amounting to \$7,034,376.

Many, perhaps the greater part of these claims and accounts, are for services rendered to the Army during the rebellion. Sickness, capture, desertion, and the sudden movement to a new field of officers employing labor, have left very many men unpaid. The reports and returns of officers of the Quartermaster's Department on file at Washington afford the means of testing the validity of the claims.

#### SAFETY OF RECORDS.

I renew a recommendation heretofore made, and which has received the approval of your predecessor, that Congress be requested to provide for the erection of a fire-proof hall of records, and I again present a plan therefor:

The papers relating to the claims filed in this office are very bulky and are valuable. They contain the evidence for and against claims reported above as amounting, on 1st July last (1878), to 12,778 miscellaneous claims and accounts, \$6,947,000; and 11,676 claims under the act of July 4, 1864, \$5,960,172.55.

Until the 2d of August of this year, 1878, it was the custom of this office to transmit to the Third Auditor of the Treasury, not only all the claims recommended for settlement in order that they might be paid or reported to Congress under existing laws for appropriation, but also all the papers, evidence, reports, and decisions in cases which on examination the Quartermaster-General found himself unable to report favorably.

On that date the Third Auditor advised this office that his file-rooms were burdened with these claims, which he had theretofore received and placed in the fire-proof rooms containing the records of his office, but that the space at his command was too small to justify him in continuing to receive papers which he found no existing law requiring him to take care of, and for which in fact he now had no space.

This office is in a building not in any respect fire-proof. A fire originating in it would, in spite of all precautions of watchmen constantly on duty here, and water always kept ready, and portable fire-extinguishers, probably clear all persons out of the building before any considerable portion of the records could be removed.

A fire-proof storehouse of simple and cheap construction could be built on some place convenient to the executive offices for about \$200,000, which would afford perfectly safe and convenient storage for such of these papers as have been finally disposed of, and for such others as are seldom consulted. Telegraphic or telephonic communications with its superintendent would bring to every office in a few moments any paper needed for reference.

Such a building would not only relieve this combustible and unsafe office of the valuable papers relating to many of these claims, but of many other papers whose loss would be a grievous calamity. It would also relieve the War and Treasury Departments of papers, which now occupy rooms, costing millions of dollars.

I submit a plan which I have caused to be prepared of such a building to be 302 by 540 feet, surrounding a court-yard 171 by 309 feet.

It would occupy a whole block, would provide 70,000 feet of asphalted floor, under fire-proof roof (about one and two-thirds acres), would contain 1,750,000 cubic feet of storage-room, and could be built for about \$200,000.

It has but one door or entrance from the street. The rooms are all separated by fire-proof party walls without openings. There are windows on the street and on the court, placed high, so as not to be easily reached or forced. Each room communicates

by a strong door with a covered porch surrounding the court-yard. A water and watch tower in the center keeps a supply of water constantly at a sufficient head to extinguish fire, which, originating in any one room, could not possibly communicate to the other rooms, and, in fact, could be extinguished before it could destroy much of the contents of the room in which it originated.

I submit this as a cheap provision for keeping in safety a great quantity of very important state papers, and at the same time relieving the handsome and costly buildings occupied by the executive departments of a considerable portion of the matter stored in them, which occupies such costly space needed for the transaction of daily business.

When, at some future time, the rooms in the building are all filled with records of the government, the court-yard containing within 25 feet of its pavement 1,321,475 cubic feet of space, can be roofed with iron, lighted by gable windows and by skylights, and fitted with shelving and cases in four tiers of 7 feet in height.

This, leaving passages for free access to every package of papers, will nearly double the storage space in the building, and will do this at an insignificant cost—that of roof and cases alone.

BARRACKS AND QUARTERS.

One hundred and fifty-three new buildings have been built or partly built during the fiscal year. They comprise barracks, officers' quarters, storehouses, stables, guard-houses, block-houses, &c., and the estimates upon which their construction was authorized by the War Department amount to \$244,535. They are at military posts in twenty-three different States and Territories, from the Atlantic to the Pacific, and from Montana to Texas.

Repairs of existing military buildings have been authorized at the estimated cost of \$290,509.

The cost of new buildings in the Department of the East is stated at....	\$61,952 00
• Repairs.....	86,151 00
Department of the South, new buildings.....	8,492 00
Repairs.....	10,837 00
Total, Division of the Atlantic.....	167,432 00
Department of Arizona, new buildings.....	4,555 00
Repairs.....	17,920 00
Department of California, new buildings.....	3,203 00
Repairs.....	21,643 00
Department of the Columbia, new buildings.....	38,332 00
Repairs.....	28,280 00
Total, Division of the Pacific.....	113,933 00
Department of Dakota, new buildings.....	66,658 00
Repairs.....	45,021 00
Department of the Platte, new buildings.....	22,824 00
Repairs.....	29,591 00
Department of the Missouri, new buildings.....	31,463 00
Repairs.....	38,964 00
Department of Texas, new buildings.....	7,056 00
Repairs.....	12,102 00
Total, Military Division of the Missouri.....	253,679 00
Grand total:	
New buildings.....	244,535 00
Repairs.....	290,509 00
	535,044 00

Repairs of wharves and docks have been authorized at—

Fort Johnson, N. C.....	\$427 00
David's Island, New York Harbor.....	3,870 00
Fort Point, Cal.....	615 00
Fort Stevens, Oreg.....	5,550 00
Total.....	10,462 00

The cost of these constructions and repairs is defrayed out of the regular annual appropriation for barracks and quarters of the Army.

Special appropriations for building purposes, in addition to these, were as follows :

The sundry civil bill, of March 3, 1879, appropriated \$40,000 for establishment of a new post at Pagosa Springs, Colo. The ground about these springs has been occupied by settlers, and the War Department has determined to place the post, which is to the south of the Ute country, on the La Platte River, in the southwest corner of Colorado, 100 miles west of Pagosa Springs.

The sundry civil bill of June 16, 1880, appropriated \$25,000 for continuing construction of quarters at Fort Omaha. Plans have been approved, and the work is about to commence.

Eighty thousand dollars was granted in the sundry civil bill for continuing the work at Assinaboine, and it is in progress. Also, \$20,000 for repairs of government quarters at Fort Monroe, also in progress; \$100,000 for completion of the necessary buildings for headquarters of the Department of Dakota at Fort Snelling.

Seventy-five thousand dollars for construction of necessary buildings, including officers' quarters, for headquarters, already commenced, of the Military Department of Texas, on the military reservation at San Antonio, the whole cost thereof limited to \$125,000. Plans have been approved and advertisement for proposals for building by contract have been ordered.

Forty thousand dollars for a new military post at or near the Mussel Shell River, Montana; site to be approved by the Secretary of War. As \$10,000 had been granted for this post by the act of 8th May, 1880, this makes \$50,000 in all appropriated therefor.

#### HOSPITALS.

Of the appropriation for hospital construction, \$75,000, there has been assigned :

In the Department of the East, to 22 hospitals .....	\$9,488 00
In the Department of the South, to 7 hospitals.....	4,608 00
<b>Total to Division of the Atlantic .....</b>	<b>14,096 00</b>
<b>In the Department of Dakota, to 16 hospitals .....</b>	<b>\$14,863 00</b>
In the Department of the Platte, to 10 hospitals.....	3,690 00
In the Department of the Missouri, to 13 hospitals.....	11,880 00
In the Department of Texas, to 10 hospitals.....	7,662 00
<b>Total to Division of the Missouri .....</b>	<b>38,095 00</b>
<b>In the Department of Arizona, to 9 hospitals.....</b>	<b>\$14,004 00</b>
In the Department of California, to 6 hospitals.....	3,896 00
In the Department of the Columbia, to 8 hospitals .....	4,774 00
<b>Total to Division of the Pacific.....</b>	<b>22,674 00</b>
<b>Grand total .....</b>	<b>74,865 00</b>

#### SALES OF BUILDINGS.

Some log buildings at old Red Cloud Agency were, on abandonment of that post, ordered to be sold.



## MILITARY SITES IN TEXAS.

The greater part of the military posts on the frontier of Texas, west and south, are built upon land to which the United States has never obtained legal title.

In 1875 Congress appropriated, on full report of a commission and of the military commanders, for purchase of military reserve at Fort Brown, at the mouth of the Rio Grande, \$25,000; for that at Fort Duncan, \$10,000; for that at Fort Ringgold, \$10,000, and authorized the Secretary of War to accept, free of cost, a conveyance of the site of Fort McIntosh. These four posts are all in the vicinity of the Rio Grande, and are important positions on the frontier between the United States and Mexico. A large military force is kept on this river to check the crossing of robbers, who ravage the border, steal and carry off horses and cattle, and commit murder and other outrages.

The law making the appropriation expressly forbade payment of any greater sum for any of the reserves than that appropriated by Congress. The sums named were fixed in accordance with the recommendation of a military board, which examined the whole subject in the year 1873, under instructions from the Secretary of War, whose report is dated May 20, 1874. It has been printed by Congress, and may be found in Ex. Doc. 282, First session, Forty-third Congress.

The only site which has thus far been purchased under this law is that of Ringgold Barracks, long in litigation. Finally, the district court of Starr County, Texas, by decree of 5th April, 1878, fixed the price to be paid by the United States at \$20,000, with expenses of counsel fee of \$500; to which were added sheriff and witness fees, amounting to \$29.49; total, \$20,529.49. As this sum exceeded the \$10,000 appropriated by Congress in 1875, application was made for a further appropriation, which was granted in the sundry civil bill of 16th June, 1880. The Department of Justice has approved the title, and orders have issued to pay the money, \$20,529.49, into court, in accordance with decree and judgment.

The owner of military reserve at Fort Duncan refused to sell at the price offered by Congress, \$10,000, demanding \$20,000.

The Secretary of War recommended an appropriation sufficient to make the purchase, which has not been granted. So this important military post remains private property, for which the United States pays an annual rental, which shows a disposition to increase from year to year.

The conveyance to the site of Fort McIntosh, given, free of cost, by the city of Laredo to the United States, has, during the year, been perfected, title approved by the Department of Justice, and that post is now the property of the United States.

The tract upon which Fort Brown, opposite Matamoras, was located at an early period of the Mexican war, has been in litigation for years. The United States has no other title than that of conquest, and the treaty with Mexico invalidated that title. A few months since the courts confirmed the title of Maria Josepho Cavazos to the lands about Fort Brown. The heirs refused to make conveyance for the sum appropriated by Congress on 3d March, 1875, \$25,000, and the United States is now a trespasser on these private lands.

On the 21st April, 1879, the Secretary of War asked an appropriation of \$200,000 to purchase sites of forts already in existence in Texas, and for such others as may be deemed necessary for the defense of that frontier.



The act of 16th April, 1880, appropriates \$200,000 for acquiring sites and erection of suitable posts for the protection of the Rio Grande frontier.

It is limited to "the purpose of acquiring sites and erecting thereon such military posts on or near the Rio Grande frontier as may be deemed necessary by the Secretary of War for the adequate protection thereof." This appropriation is not applicable to purchase of sites of posts distant from the Rio Grande frontier. It is subject, also, to the condition that the appropriation cannot be used till valid title is vested in the United States, and that the State of Texas shall release and relinquish to the United States the right to assess or tax said sites, and any improvements placed thereon for military purposes, so long as the United States remains the owner thereof. Nothing has been done to execute this law, so far as the Quartermaster-General is informed, except to order an assistant quartermaster, Capt. L. E. Campbell, to proceed to Texas to report to the commanding general, Ord, for duty in connection therewith.

#### FIRES.

The department has suffered loss by eight fires during the year: At Fort McDermit, Nev., a kitchen and dining room were destroyed. At Fort Wayne, Mich., a bakehouse. At Fort C. F. Smith, Oreg., one set of officers' quarters. At Fort Vancouver, Wash., a storehouse. At Fort Sanders, Wyo., one set officers' quarters. At Fort Reno, Idaho, the quarters of two officers. At Fort Meade, Dak., a similar loss. At Fort Colville, Wash., an office building.

#### MILITARY RESERVATIONS DECLARED.

Eight military reservations have been proclaimed by the President:

At Cheyenne Depot, Wyo., 4th November, 1879.

At Fort Robinson, Neb., 4th November, 1879.

At Fort Sanders, Wyo., 4th November, 1879.

At Fort Cameron, Utah, 10th November, 1879.

At Fort Niobrara, Neb., 2d July and 10th December, 1879.

At Fort McKinney, Wyo., 2d February, 1880.

At Fort Assinaboine, Mont., 4th March, 1880.

At Fort Cœur d'Alene, Idaho, 22d April, 1880.

At Fort Sidney, Nebr., 31st May, 1880.

#### CLOTHING, CAMP AND GARRISON EQUIPAGE.

The expenditure on account of clothing and equipage of the Army during the fiscal year was \$970,691.36. This branch of the Quartermaster-General's Office has been under care of Lieut. Col S. B. Holabird, who, on 11th November, 1879, relieved Lieut. Col. J. D. Bingham, who had been in charge thereof since the 4th April, 1870. I parted with Colonel Bingham with great regret, for his vigilant and intelligent co-operation in the work of this office had been of great assistance to me; but he needed relief after long confinement to sedentary occupation, and therefore he was transferred to Fort Leavenworth, where, as chief quartermaster of the Department of Missouri, he will have the opportunity, while still charged with heavy responsibilities, of leading a life physically more active.

The rigid economy in appropriations enforced by Congress has at length so exhausted the stock of clothing and equipage in the military

depots that great inconvenience has resulted. The appropriations do not become available till 1st July of each year. It takes time to advertise, receive, and discuss proposals, and make contracts for cloth and clothing, and blankets especially. The Army uses goods not in civil use, and of which no stock is kept on hand by merchants and manufacturers. After the contracts are signed and executed according to law, which work is generally not completed before the month of August, it is necessary to manufacture the goods. The same manufacturers do not succeed every year in being the lowest bidders, and new contractors with the United States are not prepared with the necessary machinery. This involves changes in the machinery of factories to adapt it to the new fabric to be made. After manufacture, the material is to be inspected and approved before it can be issued, and in the case of clothing, before it can be placed in the hands of the tailors and seamstresses, who make the garments. The advertisement inviting proposals for delivery of clothing and equipage for the present fiscal year was dated June 4, 1880. Bids were opened July 20; contracts were awarded July 26, and executed August 5. Deliveries are to be made as follows: Kersey, the material for trousers and great-coats, first delivery August 31, 1880, last delivery March 31, 1881. Shirting flannel, first delivery September 15, 1880, last delivery April 15, 1881. Blankets, first delivery October 31, 1880, last delivery January 31, 1881. Woolen stockings, first delivery September 6, 1880, last delivery March 6, 1881.

Much of the Army is stationed at posts on the Upper Missouri and its tributaries, which are not navigable in the fall. Nearly all of it is remote from the factories and the centers of population in which are the depots for collecting and distributing clothing and equipage.

The stock of old Army clothing left over at close of the war, has at length disappeared, and there is nothing in depot, after filling the annual requisitions, for clothing which can be issued between the latter part of the spring and the time when the new clothing becomes available. There is, in short, as I have frequently represented, no working stock, and the Army suffers for want of such.

On June 30, 1880, there were unfilled requisitions from military posts for nearly 4,000 hats, 8,600 caps, 6,500 great-coats, 15,000 pairs of drawers, 31,000 pairs of trousers, 77,000 pairs of stockings, and others were received before the contractors and manufacturers were able to deliver to the depots any considerable quantity.

It is very desirable that Congress would, for one season, grant an appropriation 50 per cent. higher than usual, in order to enable the Quartermaster's Department to accumulate such a working stock, after which the ordinary annual appropriation would be sufficient.

There have been reasons for stringent economy in appropriations, due to the political movements of the last few years, which it is hoped may not exist during the approaching winter; and, if so, it will be well to present this subject separately for the consideration of Congress.

Of the old stock of clothing all the larger sizes had been consumed, so that from what remained on hand it was not possible to fill requisitions for any body of troops. Moreover, it had deteriorated by effect of time and ravages of moths, and on the 19th December last, the War Department determined to condemn the whole of it, and to set it apart for transfer to the National Home for Disabled Volunteers, which has been done, to the great relief and satisfaction of the Army. Only what is known as the new pattern clothing is now issued to troops.

Frequent inspections of factories employed in manufacture for the Army have been made with great advantage to the public and to the

contractors, by Capt. John F. Rodgers, who has for some years given attentive study to the whole business of manufacture of military clothing.

The contractors save money and are pleased at these inspections, because errors are pointed out before they go so far as to involve rejection of materials, and the United States is benefited by a more prompt delivery of a better article.

New patterns in standards for great-coats, cotton socks, drawers, and for cork helmets for use in hot regions have been, during the past year, adopted and distributed. As complaint has been made that in some cases the brass screws used to fasten the sole to the upper leather of the boots and shoes work through and injure the feet, a convenient file has been procured and distributed, by which this difficulty can be remedied by the soldier himself. On rocky and stony soil the leather wears away faster than the metal screw, which is, therefore, forced through the sole. Yet these boots and shoes outlast all others and are generally preferred and are believed to be the best for military use. The ordinary sewed shoe or boot would be entirely worn out before the brass one becomes uncomfortable.

The improvements in manufacture are watched and specifications of Army supplies are changed from time to time to conform to improvements or to secure the benefit of new fabrics.

New specifications for cork helmets, uniform coats, chevrons, great-coats, blouses, lined and unlined, stable frocks, overalls, fur caps, and gauntlets for the extreme North, trousers, stripes for trousers, drawers, stockings, hospital tents, flies and poles, wall-tent poles, shelter-tent poles, tent-pins, mosquito nets, bed-sacks, pillow-sacks, shoe-files, and for cotton duck for tents have been printed during the year.

Clothing valued at \$2,535 was issued from necessity to certain Indian prisoners, and the accounts therefor have been presented to the Department of the Interior for reimbursement of the appropriation of the Quartermaster's Department.

Twenty-five wall and 1,500 A tents were issued by order of the War Department for relief of the people of Memphis during the yellow-fever epidemic. All tents sent to places infected were, after the epidemic disappeared, burned under inspection of officers of the Quartermaster's Department to prevent the possibility of contagion, as, had these tents been returned to military depots, they would in time have been used again and involved danger to the troops.

Fifty hospital tents were sold to the National Board of Health at their request, and by order of the War Department. Their value, \$2,732.82, has been refunded by the board.

By order of the War Department, and under act of April 23, 1880, there were sent to the governor of Missouri, for relief of sufferers from the tornados which made havoc in that State, 150 hospital tents, cost, \$8,262; and to Mr. R. F. Walker, at Versailles, Mo., 16 hospital tents, cost, \$881.28—total, \$9,143.28. None have been returned, though the return has been called for.

A very large stock of silken flags, regimental and national, remained at the close of the war. The devices on these flags are painted in oil, and in time the silk breaks, so that many of them had become unserviceable while in store. All these have been inspected and separated into two classes, those still fit for use in the field and those which can be used only to decorate offices, chapels, &c. A considerable number have been set aside to be used in decoration of the new War Department building whenever completed.

To the National Home for Disabled Volunteers, under the act of Jan-

uary 23, 1873, have been transferred old and condemned clothing to settle the account with that institution due June 30, 1879, to the value of \$21,448.88; and in satisfaction of their requisition of January 9, 1880, for 1,443 suits of clothing to the value of \$31,739.29—total to the Home during the year, \$53,238.17.

The military prison at Fort Leavenworth, Kans., was indebted to the Quartermaster's Department, on June 30, 1879—

For clothing and equipage.....	\$5,054 23
Clothing has been issued to it during the year to the value of.....	8,695 23
	<hr/> 13,749 46

But clothing heretofore issued to the prison has been since retransferred to the Quartermaster's Department to the value of ..... 5,558 25.

Leaving the prison indebted to the Quartermaster's Department in the sum of..... 8,191 21

Other quartermasters' stores and supplies, to the value of \$2,001.79, have also been issued to the military prison.

The value of labor by the prisoners for the Quartermaster's Department is stated during the fiscal year to have amounted, on account of clothing and equipage, to \$6,599.40; on account of other appropriations of the Quartermaster's Department, \$3,057.40—total, \$9,656.80.

From the account prepared in the clothing branch, embodied in the report of Lieut. Col. S. B. Holabird, it appears that the prison was indebted to the Quartermaster's Department on the 30th June, 1880, on account of value of clothing and stores drawn in excess of the value of labor performed during the last fiscal year, to the amount of \$536.20.

A full statement of all articles manufactured for the Quartermaster's Department of the Army by the prison accompanies this report. They comprise as stated :

	Cost.						Average price per pair or number.
	Materials.	Royalty on heel-ing-machine.	Civilian labor.	Prison labor.	Recutting heel-files and use of rivet-set.	Total.	
25,225 pairs boots.....	\$63,030 62	\$122 68	\$2,224 00	\$3,408 80	\$5 00	\$68,701 10	\$2 73
31,228 pairs shoes .....	49,819 48	150 71	1,117 33	2,353 90	5 00	53,446 42	1 71
100 pairs laced boots .....	261 31	.....	40 00	70 00	.....	371 31	3 71
100 pairs laced shoes .....	191 31	50	40 00	50 00	3 00	284 81	2 85
1,915 barrack-chairs .....	1,818 78	.....	.....	563 65	.....	2,384 43	1 24½
65,000 tent-pins.....	841 30	.....	.....	151 05	.....	992 35	1½

The chairs manufactured and supplied to barracks, though of the style in ordinary use for plain strong chairs, in many cases became rickety in the joints, and in some broke down entirely. Iron bolts and braces have been distributed, with instructions and tools for applying them, since which complaints on this subject have ceased.

NATIONAL MILITARY CEMETERIES.

There are eighty national military cemeteries. Seventy-one superintendents have heretofore been provided for by Congress, but at the last session another was authorized.

During the fiscal year two died, three resigned, and five were appointed in their places, leaving the number on 30th June, 1880, unchanged, at 71.



Some few bodies of southern soldiers have been removed from the national cemeteries by their friends or by southern societies.

One hundred and forty-three interments of persons known, and forty-two of those unknown, have been made during the year.

The number remaining in the national cemeteries on 30th June, 1880, was—known, 170,997; unknown, 147,495.

The lists of interments in village and city cemeteries are not yet full, and though many stones have been prepared for shipment from the quarry, none have yet been put in place.

Applications for headstones, with names of deceased, are still daily received at this office.

New lodges have been contracted for at Beaufort, S. C., Mobile, Ala., and Chalmette, La. That at Mobile has been begun.

The inclosing wall of the Chattanooga cemetery has been rebuilt, and a handsome stone gateway has been erected. The gateway of the Vicksburg cemetery has been completed, and the road, for which Congress made special appropriation, leading from the city thereto, is in progress.

The road from the Georgetown bridge to Arlington forms practically the only approach from Washington to that great cemetery, as the reluctance to pass railroad trains on the Long bridge prevents most strangers from using it. It is much to be desired that Congress grant an appropriation for the improvement of this road much traveled when practicable, but often almost impassable for carriages. The cemetery is very beautiful. It is an object of general interest to citizens who visit the District, and while the number of visitors is great, many are prevented by the bad condition of this road from doing honor to those who lie under the sod of Arlington.

I again recommend that this cemetery, which contains 208 acres, and in which very few interments are now made, be declared by law a national public cemetery, for the interment of soldiers, sailors, members of Congress, and officers of the Government, whom their friends may desire to inter in the vicinity of the capital.

The present Congressional Cemetery is too near the city, which is advancing towards it and in time must overflow it. The civilized world is abandoning the practice of burying the dead within the limits of populous cities.

The appropriation for the protection and care of the prisoners' cemetery on Johnson's Island, Lake Erie, near Sandusky, it has not as yet been possible to apply to its object. The owner of the site insisted upon the following conditions :

That if at any time the government should cease to keep the lot in good condition, or cease to use it for cemetery purposes alone, it should revert to the present owner, and that some one, to be designated by the said owner, his heirs or assigns, should be appointed to have charge of it at all times.

As the proviso to the appropriation required that before any expenditure is made the title to the land shall be transferred to the United States, and as no title subject to such conditions would be approved, and the government could not place the appointment of the superintendent in the hands of any private citizen, the money remains in the Treasury unapplied.

The reports of the officers on duty in this office, to whose zealous and intelligent and faithful assistance I am greatly indebted, accompany this report. They contain or are followed by many tabular statements, which give in great detail the operations of the Quartermaster's Department of a small army, occupying, however, a continental field of activity.

Bvt. Maj. Gen. Stewart Van Vliet has had charge of the inspection branch of the office; Bvt. Brig. Gen. S. B. Holabird, of the accounts and

clothing and equipage branches; Lieut. Col. H. C. Hodges, of the transportation, regular-supplies, and miscellaneous-claims branches; Bvt. Lieut. Col. J. M. Moore, of barracks and quarters, and of claims under act of 1864; and Bvt. Lieut. Col. A. F. Rockwell, of all that relates to national cemeteries, besides acting as depot quartermaster for the depot of Washington.

Respectfully submitted.

M. C. MEIGS,

*Quartermaster-General, Brevet-Major-General, U. S. A.*

Hon. ALEXANDER RAMSEY,

*Secretary of War.*

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*List of papers accompanying the annual report of the Quartermaster-General, for the fiscal year ending June 30, 1880.*

1. Report of Col. Stewart Van Vliet, assistant quartermaster-general United States Army, of the inspection branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1880.

A.—Report of officers of the Quartermaster's Department for the fiscal year.

B.—Report of stations and duties of officers of the Quartermaster's Department.

C.—List of officers on duty as acting assistant quartermasters, and of the stations at which they have served during the fiscal year.

2. Report of Lieut. Col. S. B. Holabird, deputy quartermaster-general United States Army, of the operations of the accounts branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1880.

3. Report of Lieut. Col. S. B. Holabird, deputy quartermaster-general United States Army, of the operations of the clothing branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1880.

A.—Statement of articles of clothing and equipage on hand June 30, 1879, the quantities purchased, manufactured, gained, sold, expended, and issued to the Army during the year, and the quantity on hand June 30, 1880.

B.—Statement of remittances on account of clothing and camp and garrison equipage during the fiscal year ending June 30, 1880.

C.—Statement of amounts received and remitted by the Quartermaster's Department on account of clothing and camp and garrison equipage during the fiscal year ending June 30, 1880.

D.—Specifications of clothing and camp and garrison equipage distributed to officers of the Quartermaster's Department during the fiscal year ending June 30, 1880.

E.—Statement showing quantity of clothing and camp and garrison equipage issued to the National Home for Disabled Volunteers, under the act of January 20, 1873, during the fiscal year ending June 30, 1880.

F.—Statement showing articles of clothing and camp and garrison equipage issued by the Quartermaster's Department to certain Indians, also the money value of the articles, during the fiscal year ending June 30, 1880.

G.—Statement of clothing and camp and garrison equipage turned over to the military prison at Fort Leavenworth, Kans., for issue to prisoners, during the fiscal year ending June 30, 1880.

H.—Statement showing articles of clothing transferred to the Quartermaster's Department by the acting assistant quartermaster at the military prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1880.

I.—Statement showing quantity and cost of articles of clothing and camp and garrison equipage manufactured at the military prison for the Quartermaster's Department during the fiscal year.

K.—Statement showing value of labor performed by the military prison for the Quartermaster's Department during the fiscal year.

L.—Statement showing number of tents issued by the Quartermaster's Department for the relief of yellow-fever sufferers during the fiscal year.

M.—Statement showing the number of tents sold by the Quartermaster's Department to the National Board of Health during the fiscal year.

N.—Statement showing number of tents issued for the use of tornado sufferers in Missouri during the fiscal year.

O.—Statement showing number of articles of clothing issued to Lieut. H. W. Howgate, U. S. A., for use of Arctic expedition, during the fiscal year.

P.—Statement of returns of clothing and camp and garrison equipage received and examined, and of letters received and written, during the fiscal year ending June 30, 1880.



Q.—Statement of the clerical force employed in the clothing and equipage branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1880.

4. Report of Lieut. Col. Henry C. Hodges, deputy quartermaster-general United States Army, of the operations of the Quartermaster-General's Office pertaining to transportation, indebted railroads, regular and miscellaneous supplies, and miscellaneous claims, during the fiscal year ending June 30, 1880.

A.—Statement of all troops and property transported under the direction of the Quartermaster's Department during the fiscal year ending June 30, 1880.

B.—Statement showing principal movements of troops during the fiscal year, and average length of march or movement in each case.

C.—Opinion of the Attorney-General, of June 18, 1880, in relation to settlements with Pacific railroads for military transportation.

D.—Abstract of contracts made by officers of the Quartermaster's Department for wagon transportation during the fiscal year.

E.—Abstract of contracts made by officers of the Quartermaster's Department for water transportation during the fiscal year.

F.—Statement of vessels owned and purchased by the Quartermaster's Department during the fiscal year.

G.—Statement of vessels chartered, impressed, and employed in the Quartermaster's Department during the fiscal year.

H.—Statement of the indebtedness of southern railroad companies for railway material for the fiscal year ending June 30, 1880.

I.—Letter to Secretary of War, of April 12, 1880, in answer to request of chairman of Senate Judiciary Committee for certain information in relation to the indebtedness of the Mobile and Ohio Railroad Company.

5. Report of Maj. J. M. Moore, quartermaster United States Army, of the operations of the barracks and quarters branch of the Quartermaster General's Office for the fiscal year ending June 30, 1880.

6. Report of Maj. J. M. Moore, quartermaster United States Army, of the operations of the claims branch of the Quartermaster-General's Office for the fiscal year ending June 30, 1880.

7. Report of Capt. A. F. Rockwell, assistant quartermaster United States Army, of the affairs relating to the care and maintenance of national military cemeteries for the fiscal year ending June 30, 1880.

A.—Statement of disbursements on account of national cemeteries during the fiscal year ending June 30, 1880.

## REPORT OF COMMISSARY-GENERAL OF SUBSISTENCE.

WAR DEPARTMENT,  
OFFICE COMMISSARY-GENERAL OF SUBSISTENCE,  
*Washington, D. C., October 11, 1880*

SIR: In compliance with the instructions contained in circular from the Adjutant-General of the Army, dated August 25, 1880, I have the honor to submit the following report of the operations of the Subsistence Department for the fiscal year ended June 30, 1880, with such remarks and recommendations in connection therewith as are thought to be for the best interests of the government and the Army.

### RESOURCES AND EXPENDITURES.

The following statement exhibits the aggregate fiscal resources and expenditures of the department for the year mentioned, and the balances remaining unexpended at the close of the fiscal year:

#### RESOURCES.

Amounts in the Treasury to the credit of appropriations of the Subsistence Department on June 30, 1879, as follows:

Subsistence of the Army, 1878.....	\$7,747 99
Subsistence of the Army, 1879.....	2,014 42
Support of United States military prison, Fort Leavenworth, Kans., 1879.....	10,801 50
Claims for quartermaster's stores and commissary supplies, act July 4, 1864, per act March 11, 1878.....	67 55

\$20,631 46

Amounts to the credit of officers of the Subsistence Department and of officers doing duty in the Subsistence Department with the Treasurer, assistant treasurers, and designated depositories, and in their personal possession on June 30, 1879, as follows:

Subsistence of the Army, 1878.....	\$244 00	
Subsistence of the Army, 1879.....	421,423 85	
Support of the United States military prison, Fort Leavenworth, Kans., 1879 (including Treasury drafts for \$575 in transitu, on June 30, 1879).....	1,539 25	
		<u>\$423,207 10</u>

Amount in hands of representatives of deceased officers to be collected:

Subsistence of the Army, 1878.....	109 84
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Amount stolen in October, 1878, to be collected from the officer responsible:

Subsistence of the Army, 1879.....	377 19
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Amount deposited to the credit of the Treasurer of the United States and in process of cover into the appropriation on June 30, 1879, since covered in, as follows:

Subsistence of the Army, 1879.....	6 00
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Amounts appropriated for the Subsistence Department for the fiscal year ending June 30, 1880, as follows:

Subsistence of the Army, 1877 and prior years, act June 16, 1880.....	\$3,368 95	
Subsistence of the Army, 1880, act June 23, 1879.....	2,300,000 00	
Commutation of rations to prisoners of war in rebel States, per act June 16, 1880 .....	8,221 38	
Support of the military prison, Fort Leavenworth, Kans., 1880 (in part).....	9,126 89	
		<u>2,320,717 22</u>

Amounts collected from various sources and refunded to the appropriations of the Subsistence Department on the books of the Treasury during the fiscal year 1880, as follows:

To the appropriation, Subsistence of the Army, 1877, and prior years.....	\$571 21	
To the appropriation, Subsistence of the Army, 1878....	316 39	
To the appropriation, Subsistence of the Army, 1879....	27,073 35	
To the appropriation, Subsistence of the Army, 1880....	89,007 03	
		<u>116,967 98</u>

Amounts received by officers of the Subsistence Department and by officers doing duty in the Subsistence Department, from sales of subsistence stores, to the following purchasers during the fiscal year 1880, and taken up for immediate disbursement under the appropriation, Subsistence of the Army, 1880:

Sales to officers of the Army, \$430,468.30; to enlisted men, \$337,282.89; to civil employes, \$15,889.25; to Indian agents, \$196.90; to naval officers, \$2,880.81; to civil engineers, \$383.44; to Signal Service, \$7.56; to steamers, \$149.17; to Quartermaster's Department, \$39.60; to United States military prison, Fort Leavenworth, Kans., \$15,390.01; of condemned stores at auction, \$3,959.70; of barrels, boxes, &c., \$838.92; of garden seeds and agricultural implements, \$1,015.31; total.....	808,501 16
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Amounts taken up by officers doing duty in the Subsistence Department, on account of stores lost, damaged, &c., and in correction of errors in their accounts, &c., during the fiscal year 1880:

Subsistence of the Army, 1877 and prior years.....	\$0 60	
Subsistence of the Army, 1878 .....	11	
Subsistence of the Army, 1879 .....	2 55	
Subsistence of the Army, 1880 .....	2,189 62	
		<u>2,201 88</u>

Total resources.....	<u><u>3,692,720 53</u></u>
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EXPENDITURES.

Amounts expended on the books of the Treasury from the appropriations of the Subsistence Department during the fiscal year 1880, as follows:

From Subsistence of the Army, 1878 .....	\$944 59
From Subsistence of the Army, 1879.....	1,025 18

From Subsistence of the Army, 1880 .....	1, 150 70	
From claims for quartermaster's stores and commissary supplies (act July 4, 1864), per act March 11, 1878 .....	67 55	
		<u>\$3, 188 02</u>
<b>Amounts disbursed by officers of the Subsistence Department and officers doing duty in the Subsistence Department during the fiscal year 1880, as follows:</b>		
Subsistence of the Army, 1878 .....	\$4 98	
Subsistence of the Army, 1879 .....	421, 002 70	
Subsistence of the Army, 1880 .....	2, 806, 220 43	
		<u>3, 227, 228 11</u>
<b>Amounts dropped by officers doing duty in the Subsistence Department in correction of errors in their accounts during the fiscal year 1880:</b>		
Subsistence of the Army, 1880 .....		111 43
<b>Amounts expended for the subsistence of military prisoners at United States military prison, Fort Leavenworth, Kans., during the fiscal year 1880:</b>		
Support of the United States military prison, Fort Leavenworth, Kans., 1879 .....	\$807 30	
Support of the United States military prison, Fort Leavenworth, Kans., 1880 .....	5, 347 35	
		<u>6, 154 65</u>
<b>Amount refunded to the Treasury and transferred to the War Department, by order of the Secretary of War, November 18, 1879:</b>		
Support of the United States military prison, Fort Leavenworth, Kans., 1879 .....		11, 533 45
<b>Amount transferred to the War Department by the Subsistence Department, by order of the Secretary of War, November 18, 1879:</b>		
Support of the United States military prison, Fort Leavenworth, Kans., 1880 .....		3, 779 54
<b>Amounts carried to the surplus fund on June 30, 1880:</b>		
Subsistence of the Army, 1877 and prior years .....	\$571 21	
Subsistence of the Army, 1878 .....	7, 358 81	
		<u>7, 930 02</u>
<b>Total expenditures .....</b>		<u><u>3, 269, 925 82</u></u>

## BALANCES UNEXPENDED.

<b>Amounts in the Treasury to the credit of appropriations of the Subsistence Department on June 30, 1880, as follows:</b>		
Subsistence of the Army, 1877 and prior years, act June 16, 1880 .....	\$3, 368 95	
Subsistence of the Army, 1879 .....	28, 331 99	
Subsistence of the Army, 1880 .....	1, 081 85	
Commutation of rations to prisoners of war in rebel States, per act June 16, 1880 .....	8, 221 38	
		<u>41, 004 17</u>
<b>Amount to the credit of officers of the Subsistence Department and of officers doing duty in the Subsistence Department with the Treasurer, assistant treasurers, and designated depositaries, and in their personal possession, on June 30, 1880, as follows:</b>		
Subsistence of the Army, 1880 .....		391, 043 19
<b>Amounts refunded to the Treasury near close of fiscal year 1880, but not carried to the credit of the appropriation by June 30, 1880:</b>		
Subsistence of the Army, 1877 and prior years .....	\$9 60	
Subsistence of the Army, 1878 .....	11	
Subsistence of the Army, 1879 .....	160 30	
Subsistence of the Army, 1880 .....	90 91	
		<u>260 92</u>
<b>Amount in hands of representatives of deceased officer to be collected:</b>		
Subsistence of the Army, 1878 .....		109 84
<b>Amount stolen in October, 1878, to be collected from the officer responsible:</b>		
Subsistence of the Army, 1879 .....		377 19
<b>Total balances unexpended .....</b>		<u><u>432, 795 31</u></u>

Fifteen thousand three hundred and twelve dollars and ninety-nine cents, appropriated for the support of Leavenworth military prison, was dropped from the funds available for disbursement under direction of the Commissary-General, instructions having been received from the War Department in November, 1879, that the requisitions for such funds should, in future, be sent to the Adjutant-General of the Army, and the accounts of funds forwarded to him for examination and transmission to the proper accounting officer of the Treasury.

#### SOURCE OF SUPPLY OF SUBSISTENCE STORES.

Supplies have, as a rule, been purchased as near the points of consumption as could be done with a due regard to economy and the quality of the supplies, and depots established at such points as were deemed advisable. In connection with the subject of supplies and depots, the chief commissary of subsistence of the Department of the Missouri, Maj. George Bell, commissary of subsistence, reports as follows:

The supplies for all the posts in this department, except the following, were sent from the Fort Leavenworth depot, or purchased by the officer in charge of it, and forwarded from the places they were obtained: Camps at White and Snake River, Colorado; the Rawlins depot, Wyoming Territory; some flour, salt, and beans in New Mexico; a small quantity of hard bread in Denver, Colo., and the fresh beef at the posts.

The stores received here were sent from Boston, New York, Baltimore, Chicago; and Saint Louis, and San Francisco, on calls made.

The following was purchased by the depot commissary: nearly all the bacon, pork, hams, lard, yeast powders, and vinegar; all the flour, except that referred to; all the starch and salt required, and a portion of the flavoring extracts and canned meats. In emergencies, other stores, to meet immediate wants, in limited quantities, were purchased.

The flour was obtained at the lowest price, usually on the line of railroad, as near the points of consumption as possible, generally by advertising in newspapers, but when necessarily prevented, by circulars. Its quality is unsurpassed in any section of the country.

The large packing establishments of salt meats at Kansas City, Mo., and Atchison, Kans., afforded an excellent resource for all articles of that character required.

The long-established experience of the officers in charge here have demonstrated the wisdom of keeping up a depot for supplies at this place. My observation has been that no other course could be satisfactorily, successfully, judiciously, and economically pursued, and the wants and emergencies in this department met at the proper time and in an efficient manner. Some place, preferable within the department limits, where the transportation of the department can be at all times controlled, should be selected for the accumulation of stores. This probably has been the best, the most convenient of access, and, if experience and results show anything, the most successful and economical. In cases of disturbance in New Mexico, a small depot would be convenient and desirable; in times of peace of little service. \* \* \*

The drought in New Mexico has necessitated the shipment from Kansas of large quantities of flour to posts located in that Territory. The extension of the railroad facilities will doubtless reduce the price of its transportation, and the superior quality of Kansas flour will enable a better article, at an equal or less price, than New Mexican flour to be furnished.

Capt. Thomas Wilson, chief commissary of subsistence, Department of the Platte, states:

During the latter part of September, 1879, the massacre of Major Thornburgh's command near White River, Colorado, and the sudden massing at Rawlins, Wyo., of many troops from various posts in the department, required unusual efforts on the part of the Subsistence Department to properly supply stores for issue and sales under the new condition of affairs, as the stores that had been thrown into the posts from which the troops had been withdrawn could not follow the troops on account of time and transportation. I have the honor to state, however, that this emergency of supply was promptly met by all concerned.

Subsistence stores of all kinds and in great quantities, and of perfect quality, were forwarded, on my requisition, from Chicago to Cheyenne Depot, and from there to White and Snake Rivers via Rawlins, with remarkable promptness, the Quartermas-

ter's Department meeting all the requirements of transportation, &c., to convey the same from Rawlins. Under circumstances of great suddenness and embarrassment, immense quantities of supplies were promptly forwarded, so that, so far as I can learn, no complaints of any character, in this respect, were made.

CONTRACTS AND PURCHASES.

During the fiscal year ended June 30, 1880, 152 newspaper advertisements and 224 circulars and posters, inviting proposals for subsistence stores, were reported to this office. The disbursements for advertising for the year, on accounts approved by the Secretary of War, amounted to \$8,207.20. There were also received, during the same period, 247 contracts for fresh meats, 52 contracts for miscellaneous articles, 26 contracts for complete rations for recruiting parties and recruits, and 2,461 informal contracts made under written proposals and acceptances.

The following table indicates the average prices of the principal component parts of the ration for the United States Army, at the subsistence-purchasing depots, for the fiscal year ended June 30, 1880, as appears from the monthly reports received from those depots:

	Pork, per pound.	Bacon, per pound.	Salt beef, per pound.	Flour, per pound.	Hard bread, per pound.	Corn-meal, per pound.	Beans, per pound.	Pease, per pound.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Boston, Mass.....	6.18½			3.40½			2.58½	
New York, N. Y.....	5.73½	7.94½	5.65½	3.32½	5.22½	1.86½	2.47½	2.45½
Baltimore, Md.....	5.82½	7.10½	6.51½	3.28½	4.07½	1.54½	2.61½	2.62½
Cincinnati, Ohio.....	5.93½		5.33½	3.02½		1.71½	2.94½	3.25
Saint Louis, Mo.....	5.65½	7.41½	6.25	3.48½	3.96½	1.48½	3.17½	3.25
Saint Paul, Minn.....	5.58½	7.30		2.99½	4.91		2.89	
Fort Leavenworth, Kans.....	4.87½	6.97½		3.00½		1.20½	3.12	
New Orleans, La.....	5.92½	7.30½	6.33½	3.18½	5.43½	1.64½	2.94½	
Chicago, Ill.....	5.31½	6.86½	5.06½	3.15½	5.32½	1.08½	2.59½	2.28½
San Francisco, Cal.....	7.62½	9.48½	5.67½	2.79½	4.51½	1.95½	2.02½	4.25
Omaha, Nebr.....	7.87	6.63½		2.95½	5.00	.77½		
Yankton, Dak.....	5.50	6.24½		2.70½				
Vancouver Barracks, Wash.....				2.77½	4.25	2.48½	1.75	
Cheyenne, Wyo.....				2.99½	4.75½			

	Rice, per pound.	Coffee, green, per pound.	Sugar, per pound.	Vinegar, per gallon.	Candles, per pound.	Soap, per pound.	Salt, per pound.	Pepper, per pound.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Boston, Mass.....	7.56½	15.24½	8.35½	16.58½	13.41½	5.87½	0.94	16.61½
New York, N. Y.....	7.14½	14.93½	8.07½	15.17	14.72½	5.33½	.54½	19.52½
Baltimore, Md.....	7.11½	15.61½	8.45½	14.52½	14.66½	5.56½	.70	18.85½
Cincinnati, Ohio.....	7.58½	16.21½	8.32½	13.68½	13.55½	5.51½	.57½	21.41½
Saint Louis, Mo.....	7.94½	17.15½	8.87½	17.68½	13.48½	4.37½	.89½	19.75
Saint Paul, Minn.....	7.91		8.49			4.75	.64½	
Fort Leavenworth, Kans.....		16.06	8.78½	15.62½		4.67	.83½	
New Orleans, La.....	7.24½	15.30½	8.26½	15.58½	15.16½	4.30	.95½	18.13
Chicago, Ill.....	7.66½	17.06½	8.48½	17.54½	14.46	5.28½	.71½	17.61
San Francisco, Cal.....	6.53½	17.39½	9.40½	20.57½	15.91	5.27½	.82½	14.48½
Omaha, Nebr.....				15.00		5.60½		
Yankton, Dak.....			10.00					
Vancouver Barracks, Wash.....	6.92½		9.62½	25.88½	15.43½	5.48½	1.00½	
Cheyenne, Wyo.....								

The average cost of fresh beef per pound at the different posts in the United States was 7.06 cents, being .606 of a cent less than the current fiscal year.



The amounts expended on account of purchase of subsistence supplies and contingencies, at the principal purchasing stations during the fiscal year ended June 30, 1880, were as follows:

Locality.	Purchases.	Locality.	Purchases.
San Francisco, Cal.....	\$181, 213 78	Boston, Mass.....	\$140, 811 94
Chicago, Ill.....	534, 964 88	Washington, D. C.....	233, 984 20
Baltimore, Md.....	61, 533 91	Yankton, Dak.....	51, 052 95
Saint Louis, Mo.....	141, 328 81	San Antonio, Tex.....	83, 136 12
Fort Leavenworth, Kans.....	211, 054 64	Cheyenne, Wyo.....	54, 380 74
Saint Paul, Minn.....	120, 068 33	Prescott, Ariz.....	52, 371 24
New York, N. Y.....	455, 130 00	New Orleans, La.....	44, 197 49
Portland, Oreg.....	57, 208 18	Helena, Mont.....	36, 584 27
Cincinnati, Ohio.....	32, 640 91	Santa Fé, N. Mex.....	23, 535 77
Omaha, Nebr.....	56, 795 31		
		Total .....	2, 571, 993 47

ADVERTISING.

When supplies or services are needed in any of the departments of the government, but immediate delivery or performance is not required by the public exigencies, the purchases of or contracts for such supplies or services (excepting personal services) are required by section 3709, Revised Statutes, to be made by advertising a sufficient time for proposals respecting the same.

Where the want of large quantities of supplies by the government can be foreseen a sufficient length of time to allow advertising, the operation of a law of this general character is undoubtedly wholesome and beneficial. A considerable portion of the supplies of the Subsistence Department is procured upon proposals after advertising in newspapers; but the law, if strictly enforced as it now stands upon the statute-books, entails in one class of cases a useless expense for advertising, and, in another, newspaper advertising is rendered wholly impracticable, owing to legislation and regulations to be hereinafter referred to.

The first of the above cases embraces those in which the supplies desired are produced by a single manufacturer, or are sold by a single business house, or are desired in such small quantities as not to warrant the expenditure of funds for advertising. In order to insure the best quality of supplies at the most reasonable prices, it is a rule of the department to deal, as far as practicable, directly with producers, packers, manufacturers, and importers. Where any of those enjoy a monopoly in any particular line of goods, no amount of advertising for proposals for those goods would have the effect of reducing prices, and the expense of advertising would therefore be useless. That portion of section 3709 referred to might be amended to advantage by exempting the Subsistence Department from its operation in the above cases, and by authorizing purchases in open market to be made in that department whenever the quantities required are too small to justify the expense of advertising for proposals.

The second class of cases embraces those which arise at a distance from Washington, in which, if the subject of advertising required by section 3709 were left to the management of the purchasing officer, subsistence supplies needed would be duly advertised for in the newspapers. In this class of cases immediate delivery is not required by the public exigencies, and advertising could readily be had, if the observance of another law, and the regulations thereunder, had not to be attended to. This last law is embraced in section 3828, Revised Statutes.

It prescribes that no advertisement for any executive department, or

bureau or office connected therewith, shall be published in any newspaper whatever, except in pursuance of written authority for such publication from the head of such department, and no bill for any such advertising shall be paid unless there be presented with the bill a copy of such written authority.

The regulations made under this section prescribe that—

I. Whenever any officer of the War Department, or any bureau thereof, or of the Army, or any board of officers, or court-martial, shall deem it necessary or advisable to advertise in any newspaper or newspapers (the design being that the advertising shall be paid for by the government), he or they will cause a copy of the proposed advertisement to be made and forwarded directly, through the head of his or their bureau, to the chief clerk of the War Department, for the action of the Secretary of War, with a letter requesting authority to publish the same, and stating in what paper or papers among those on the official list of the department the advertisement should, in his or their judgment, be inserted, and for what length of time.

• • • • •  
Heads of bureaus will transmit these applications to the chief clerk of the War Department, with their recommendations indorsed thereon.

• • • • •  
In cases of emergency, application may be made and authority granted by telegraph to publish an advertisement, in which case the date and nature of such advertisement only need be stated. The officer so authorized should immediately transmit to the chief clerk of the War Department twelve printed slips of such advertisement, and report the name of the newspapers ordered to publish the same, with number of insertions in each.

The application of the above laws and regulations to the incidents of service at Washington, and within one or two days' mail journey from that place, is not attended with a greater embarrassment or expense than that of the delay and the clerical labor involved in writing to and from the War Department, through the intermediate bureau, preliminarily to inserting the advertisement in the newspapers. Where, therefore, the wants of the service at purchasing centers within that mail distance from the War Department can be foreseen for ten or fifteen days in advance, the preliminaries of obtaining consent to advertise in newspapers can be attended to, and the law requiring advertisement fully complied with. But, as the distance from Washington increases, the practicability of obtaining consent lessens in respect to those wants which can be foreseen for a short period only, until at certain distances newspaper advertising for this class of wants becomes wholly impracticable, unless the more expensive mode of communication by telegraph is resorted to.

In order that the provisions of section 3709 may in some sort be complied with in this last class of cases, it has been found necessary to construe the word "advertising" in that section to mean other methods than *newspaper* advertising; and, accordingly, it is prescribed in orders that—

Advertising in newspapers is to be used when there is sufficient time. \* \* \*  
But the law does not confine advertising solely to newspapers, and the Secretary of War is of opinion that invitations to the public to bid, given by handbills posted in public places, are as much advertising within the meaning of the law as insertion of notices in newspapers.

The combined effect of these laws and regulations is, in a large number of instances, to force the purchasing officers of the government at a distance from Washington to resort to what are known as open purchases, or what have hereinbefore been termed "informal contracts," the regulations in respect to which prescribe that—

When an exigency demands that purchases in open market be made, the purchasing officer will, if time permit, notify the principal dealers in the articles needed who may

be within his reach, and will request them to submit written sealed proposals for the sale of the supplies required. This notice may be given by handbills posted in public places, by circular letters addressed to the principal dealers, or by both these means combined.

Posters are used by the office of the Subsistence Department to a limited extent only. The greater amount of purchases in the Subsistence Department—aside from those where newspaper advertising is possible—are made by addressing circular letters to principal dealers in the localities where supplies are required.

The obvious policy of the law requiring advertising is to prevent undue formations of preferred classes of dealers with the government, and to place the government, as a buyer in the markets, upon the same footing as a private purchaser, and, by giving a knowledge of its wants a wide circulation, enable it to reap the advantages which active competition invariably secures. Newspaper advertising, besides informing wide areas of country of the wants of the government, has the advantage of presenting to the local public a knowledge of the public transactions occurring in its midst. The circulation of handbills among special dealers in a locality is to a certain extent a withholding of public information, and may be taken advantage of for the repression of competition wherever business combinations may be made by the dealers thus specially favored with notice. It is true that the same combinations might still occur were notice by newspapers given, but in such cases it would be in the face of the whole public who had been invited to compete, and no reproaches could be cast upon the government officer for any supposed partiality or for any lack on his part of making the wants of the government generally known. The very object of requiring advertisement at all appears to be the giving of wide *public* notice; and any method which makes the wants of the government known only to individuals would seem to be a departure from the spirit, if not the letter, of legislation upon the subject. This departure is the greater as the circle of individuals narrows; and in this view, any deviation from the widest public notice—which is afforded only by the newspapers—is a failure to give that notice which section 3709 appears to require.

The reason for having resort to this limited method of advertising at stations remote from Washington has been shown to be the legislation embraced in section 3828 and the regulations that have been promulgated thereunder. This section and regulations, besides entailing considerable correspondence upon purchasing officers, the intermediate bureaus, and the War Department, preliminarily to newspaper advertising where the same is possible within the limits of time when the prospective wants of the government become known and when those wants are to be supplied, have the same effect of neutralizing to a serious degree, in remote localities, the salutary provision of section 3709, which requires advertisement in all cases where immediate delivery or performance is not required. This neutralization, as has been shown, results in the substitution of "handbills posted in public places," and the sending of circulars to "principal dealers," in place of newspaper advertising in those localities.

The defect of this section and the regulations thereunder, is, so far as the Subsistence Department is concerned, the rendering of newspaper advertising largely impracticable in distant purchasing localities, because there is not, in many cases, time in which to send from such localities, through the office of the Commissary-General to the War Department, copies of proposed advertisements for the purpose of solic-

iting permission to insert them in newspapers already designated by the War Department, and receive back permission in time to secure a sufficient number of publications before deliveries are to be made. The remedy for this defect can be applied in either one of two alternative ways, viz :

1. Either repeal section 3828, or at least exempt the Subsistence Department from its operation, and thus leave advertising by newspapers to be done freely under section 3709 (amended as hereinbefore suggested), and such suitable regulations as may be prescribed thereunder; or,

2. If "written authority" be deemed essential from the head of the department to regular purchasing officers before the latter can advertise in the newspapers officially designated for the purpose, then such written authority to be given in general, to each purchasing officer of the Subsistence Department, by a special letter, empowering him, under suitable regulations to be prescribed, to advertise in the newspapers upon the official list whenever the exigencies of service render it necessary under section 3709.

#### SUBSISTENCE STORE-HOUSES.

Frequent complaints have been received at this office of the character, capacity, and condition of store-rooms provided at posts for the Subsistence Department.

Subsistence stores should be carefully stored, and protected from the weather and the influence of extreme heat and cold, as far as practicable. The storage furnished for this purpose is now entirely under the control of another department. As has been stated in a report received at this office, "the Subsistence Department is the only one in the Army which seems to have no control over the plan or condition of the buildings used by it."

I am of the opinion that the interests of the service will be subserved, if it be provided by law or regulations that subsistence store-houses shall be constructed and kept in repair by the Subsistence Department, or, if by the Quartermaster's Department, that they shall be constructed upon plans prepared or approved by the Commissary-General of Subsistence, and such repairs shall be made as he may deem necessary for the safe-keeping of the stores.

#### SALES OF SUBSISTENCE STORES TO OFFICERS AND ENLISTED MEN.

By the Regulations of the Army of 1825 (paragraph 1153), it was provided that "at all posts established, or hereafter to be established, on the Sabine, Red River, Arkansas, Missouri, Upper Mississippi, and its waters, on the Upper Lakes, and the post of Saint Mark's in East Florida, assistant commissaries of subsistence may sell to officers such quantities of provisions as are required for their subsistence, charging them the contract price for the same, to which must be added cost of transportation." Similar authority for sales (extending, however, the quantities authorized to be sold to those required for officers' families) was continued in Regulations of 1834 and 1841, but in the Regulations of 1857 (paragraph 1089) the words "subsistence stores" were substituted for "provisions," and it was provided that such sales should be "at contract or cost prices, without including cost of transportation." These provisions were continued in the Regulations of 1861 and 1863.

During the rebellion, other than components of the ration were pur-



chased by officers of the Subsistence Department for issues to hospitals and sales to officers. The latter sales were, however, made, without any special authority of the War Department, at cost price, not including cost of transportation.

On the 14th of March, 1866, the following was addressed to the Commissary-General of Subsistence by the supervising commissary of subsistence then on duty in Saint Louis, Mo:

As there are many remote posts at which it will be impossible for officers to purchase groceries at reasonable prices, I have the honor to request that I may be authorized to purchase reasonable quantities of the articles usually required for the subsistence of an officer's family, to be sent to those remote posts.

This paper was referred by the Commissary-General of Subsistence to the honorable Secretary of War, "with the recommendation that the authority asked for \* \* \* may be granted, and that the authority may be made general for those posts that are remote from markets, and where officers are mainly dependent upon the Subsistence Department for their own and families' supplies." This recommendation was approved by the honorable Secretary of War, and the following order upon the subject issued:

[General Order No. 20.]

**PURCHASE OF GROCERIES FOR OFFICERS AT REMOTE STATIONS.**

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,  
*Washington, April 13, 1866.*

The Subsistence Department will purchase reasonable quantities of the articles usually required for the subsistence of an officer, and cause the same to be forwarded to posts and stations remote from markets, where officers are mainly dependent upon the Subsistence Department for supplies, or where they cannot purchase groceries at reasonable prices.

The sale of the stores herein authorized will be made under paragraph 1229 Revised Army Regulations.

By order of the Secretary of War.

E. D. TOWNSEND,  
*Assistant Adjutant-General.*

It will be observed by the latter clause of this order that the sales of the stores were to be made under the provisions of paragraph 1229 Revised Regulations, edition 1863; that is, they were to be sold at cost, not including cost of transportation.

By section 25 of the act approved July 28, 1866, the Subsistence Department was "authorized and required to furnish such articles as may, from time to time, be designated by the inspectors-general of the Army, and the same to be sold to officers and enlisted men at cost prices."

Stores authorized to be sold by this act, as well as those authorized by the regulations of the Army, were sold at cost prices, not including cost of transportation, until July 1, 1879.

By the act making appropriation for the subsistence of the Army for the fiscal year ending June 30, 1880, it was provided "that to the cost of all stores and other articles sold to officers and enlisted men, except tobacco, as provided for in section one thousand one hundred and forty-nine of the Revised Statutes, ten per centum shall be added to cover wastage, transportation and other incidental charges."

This percentage in addition to cost continued to be charged upon *all sales* to officers and enlisted men, until the commencement of the current fiscal year, but by the act making appropriation for subsistence of the Army for the current year it was provided "that subsistence supplies may be sold to companies, detachments, and hospitals, at cost prices, not including cost of transportation, upon the certificate of an officer commanding a company or detachment, or in charge of a hos-



pital, that the supplies are necessary for the exclusive use of such company, detachment, or hospital."

I recommend that it may be provided by law that all sales of subsistence supplies to officers and enlisted men shall be made at cost prices, not including cost of transportation, at all posts and issuing subsistence depots or in the field, under such regulations as may be established by the Secretary of War, and that the cost price of each article shall be understood to be the invoiced price of the last lot of that article received; this should be fixed by law, no matter whether stores are sold at cost without adding cost of transportation or not, as it is extremely inconvenient, and in many cases impracticable, to ascertain and charge for stores the exact cost, when there are many lots of the same kind on hand costing different prices, while if the last invoiced price governed, a single price will be charged for all lots of stores of the same kind, and the price could be readily ascertained.

#### PURCHASE AND ISSUE OF TOBACCO.

Returns of provisions rendered for the fiscal year ended June 30, 1880, show that 223,861 $\frac{3}{8}$  pounds of chewing and 67,059 $\frac{5}{8}$  pounds of smoking tobacco were supplied during that year to officers and enlisted men.

Of the above quantities, the value of that supplied to enlisted men on tobacco returns received and forwarded to the Paymaster-General United States Army is \$114,846.43. During the fiscal year there has been collected by the Pay Department and returned to the appropriation for subsistence of the Army, 1880, \$96,446.92; collected and not yet returned to the appropriation, \$18,471.32; deposited to credit of Treasurer of the United States and not yet carried to credit of the appropriation, 86 cents; returned in kind, 3 pounds, value \$1.78.

Under existing laws, not exceeding one pound of tobacco per month can be sold to each enlisted man. A bill was introduced into the House of Representatives during the last session of Congress (H. R. 6179), increasing the amount to one pound and a half; this was favorably reported upon from the Military Committee of the House, and I recommend it through you to the favorable consideration of Congress.

A bill, of which the following is a copy, is now on the Calendar (H. R. 4395):

**A bill to regulate the method of purchasing tobacco for the use of the Army.**

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War be, and he is hereby, directed to cause all contracts for tobacco purchased for the use of the Army of the United States to be made in the city of Washington; and for that object he shall annually cause proposals to furnish the Army with tobacco for the next year to be invited in New York, Baltimore, Saint Louis, Chicago, Quincy, Louisville, Richmond, Petersburg, Lynchburg, Danville, Durham, and Winston. These proposals to be received at the Commissary-General's Office and acted upon by designated officers of the Subsistence Department, under the supervision of the Commissary-General.*

I am of the opinion that tobacco can be as well and economically purchased by inviting proposals to be opened in New York, Chicago, and Saint Louis, as by receiving proposals only in Washington. In connection herewith attention is respectfully invited to the following extracts from a communication addressed by me to the honorable Secretary of War, dated March 12, 1880, in reply to a communication of Hon. J. E. Johnston, United States House of Representatives, addressed to him under date of March 2, 1880:

Referring to the communication of Hon. J. E. Johnston, United States House of Representatives, addressed to you under date of March 2, 1880, requesting your views

as to the bill which accompanied it, relating to the purchase of tobacco for the Army, and which letter was referred to this office for report, I have the honor to state as follows:

Tobacco is furnished to the enlisted men of the Army by virtue of authority contained in section 1149, Revised Statutes, which is as follows:

"Tobacco shall be furnished to the enlisted men by the commissaries of subsistence at cost prices, exclusive of the cost of transportation, in such quantities as they may require, not exceeding sixteen ounces per month."

It is purchased, as are the articles of the ration, by officers of the Subsistence Department, under the direction of the Secretary of War. (See section 1141, Revised Statutes.)

From 1865—when tobacco was first authorized to be purchased—to the last year, as a rule, proposals for tobacco had been received by the commissaries of subsistence at New York and Saint Louis, in which cities it is understood that most prominent tobacco manufacturers have agents; proposals had during the period been invited, and some purchases made in Louisville; but the tobacco furnished there did not give the same satisfaction as that purchased in New York or Saint Louis; hence the purchase in Louisville was discontinued.

Within the last year proposals have been invited and bids received at Chicago, Saint Louis, and New York. The two advertisements inviting proposals to be received in New York were published in the New York Commercial Advertiser, Evening Post, Daily Times, Tribune, and Shipping and Commercial List; one for 16 days and the other for 23 days. The advertisements of the commissaries in Chicago and Saint Louis were published in the Chicago Tribune, Quincy (Ills.) Daily Whig, Saint Louis Globe Democrat, and the Louisville, Ky.) Commercial, for nine, sixteen, and twenty days.

\* \* \* \* \*

As by existing laws tobacco can be purchased in the manner and at the place proposed by the bill, and the last contract was actually so made, I do not deem any special legislation upon the subject necessary.

#### SUPPLIES CONDEMNED, LOST, DESTROYED, ETC.

The value of supplies inspected and condemned during the fiscal year ending June 30, 1880, was.....	\$17,255 41
From such of the above as was sold there was realized the sum of.....	4,630 11
Net loss on account of supplies condemned.....	13,225 30

The value of stores reported on returns as lost in transportation and no one found responsible therefor, and as extraordinary wastage, &c., was.....	\$15,187 59
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The value of stores lost in transportation during the fiscal year ending June 30, 1880, where responsibility for the loss has been fixed, was.....	1,008 05
The amount collected and taken up on officers' accounts, or covered into the Treasury on above account, was.....	\$386 29
Collected and not yet covered in .....	102 55
	488 84

Leaving a balance to be collected and accounted for of.....	519 21
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Subsistence stores costing \$2,631.34, and commissary property, \$210.30, were destroyed at Vancouver Barracks, Washington Territory, on the 8th of March, 1880, by the burning of the storehouse of the post commissary and quartermaster at that post. Stores to the value of \$756.44 were lost or destroyed in the engagement with the Ute Indians on Milk River, in October, 1879.

Of the supplies not paid for, the sum of \$150.50 is for stores issued at the request of the Indian Department to destitute Yuma Indians in the month of June, 1880; \$232.23 for subsistence supplies transported to Lieut. R. H. Pratt, Tenth Cavalry, for the Indian school at Carlisle; \$177.49 for subsistence supplies furnished destitute Gros Ventres Indians in September, 1879; and \$949.69 for subsistence supplies furnished destitute Piegan Indians in March, April and May, 1880. The remainder of the supplies not paid for was issued to Indian prisoners.

The issues to Sioux Indian prisoners at Fort Keogh from April to June, 1880, both inclusive, were made with the approval of the honorable Secretary of War, upon the request of the honorable Secretary of the Interior, that the Sioux from the British Possessions on this side of the line should be permitted to surrender to the military authorities at the various posts in Dakota and elsewhere; that they should be fed until such time as other arrangements could be made for their maintenance.

The authority of the Secretary of War for such issues did not look to the continued subsistence of these Indians by the Subsistence Department, but that arrangements should be made during the then session of Congress to enable the proper department to feed them; and I am of the opinion that the issues should now be discontinued and the Indians turned over to the Indian Department to be fed.

The value of the stores issued to Indian prisoners of war during fiscal year ending June 30, 1880, and not included in above detailed statement, was \$1,517.03.

The value of the stores issued to friendly and destitute Indians visiting posts during fiscal year ending June 30, 1880, was \$3,578.86.

#### ILLUMINANTS FOR THE ARMY.

The issues of oil for exterior illumination at the various posts under the provisions of General Orders No. 17, Headquarters of the Army, Adjutant-General's Office, series of 1870, during the fiscal year ending June 30, 1880, amount to 7,348 gallons.

The amount expended at Columbus Barracks, Ohio, for gas for above purposes was \$356.95.

Issues of oil and candles for lighting evening schools, post libraries, reading rooms, and chapels have been made under the provisions of par. 13, General Orders No. 24, and par. 2, General Orders No. 84, Headquarters of the Army, Adjutant-General's Office, series of 1878, during the fiscal year ending June 30, 1880, to the extent of 1,037½ gallons of oil and 14,732 pounds of candles.

An expenditure of \$41 has also been made for gas for above purposes at Columbus Barracks, Ohio.

In my last annual report I stated, "It is understood that the board" (which had been convened in accordance with my recommendations) "is making an exhaustive investigation of the subject referred to, and I trust that the result will be reached, at an early date, of lighting company quarters in such a manner as to secure the end sought by me in making my recommendation for the appointment of a board."

The board on the 20th of November, 1879, submitted a report recommending "that kerosene with a flash point of not less than 135° F. \* \* \* be adopted for purpose of general illumination in the Army," and "that the Subsistence Department furnish the oil, lamps, lanterns, &c., requisite for the light recommended."

This report was received at this office with the recommendation of the Quartermaster-General of the Army, that the Quartermaster's Department should furnish the lamps, &c., and the Subsistence Department the kerosene oil.

On the 17th of July, 1880, the report and accompanying papers were returned by me to the honorable Secretary of War with a report from which the following is an extract:

I have retained the report and papers with a view of ascertaining whether it would be consistent with a due regard to economy and proper care of subsistence supplies for me to recommend that kerosene oil be furnished by the Subsistence Department, if it

should be adopted for the purpose of general illumination in the Army as has been recommended by the board, which recommendation has been concurred in by the Quartermaster-General.

With this view, I addressed to the purchasing commissaries in New York, Boston, Cincinnati, and Chicago, a circular letter requesting them to "ascertain and report to this office, at their earliest convenience, if coal oils of any kind are, as a rule, kept on hand for sale by the large dealers in groceries in those cities; and, if they are, whether or not they are kept in same building or room or transported in cars or other vehicles with ordinary groceries; if any are so kept and transported, to report the kinds and if any of them are odorless."

After a perusal of the replies and conferences with dealers in groceries, I do not feel warranted in recommending that kerosene oil shall be purchased and kept on hand by the Subsistence Department.

I regret to be compelled to arrive at this conclusion, as I had desired that the Subsistence Department should aid in affording proper illuminants for the Army, but if it should be decided that kerosene oil shall be adopted for the purpose of general illumination in the Army, I must recommend that it shall not be purchased, kept, sold, or issued by the Subsistence Department.

In my indorsement (fourth), of May 8, 1879, in which I recommended that a board be convened "for the purpose of fully examining and reporting upon the subject of lighting company quarters with oil," I stated that "no product of coal-oil which I have ever seen should be purchased by the Subsistence Department for illuminating purposes, for the reason that if transported or stored with subsistence supplies some of the more delicate stores will become impregnated with the odor and taste of the oil; hence I do not think any experiments should be made with any such oil, unless one entirely odorless can be procured; if such can be, experiments might be made."

While for the reasons above given I did not deem it proper for me to recommend that kerosene oil should be purchased, kept on hand, or issued by the Subsistence Department, I am pleased to learn, as I have unofficially, that it has been decided that it shall be furnished by the Quartermaster's Department, and that the end I had in view in making my recommendations for the appointment of a board will probably be accomplished. •

#### ISSUES TO DESTITUTE CITIZENS.

By joint resolution of the Senate and House of Representatives, approved May 4, 1880, the Secretary of War was authorized and empowered to send four thousand rations to Macon, Miss., for the use of sufferers made destitute by the cyclone of April 25. On the 5th of May, these stores of the value of \$514.94 were turned over by Maj. M. P. Small, commissary of subsistence, in Chicago, Ill., to the quartermaster's department in that city, for transportation to Robt. C. Petty, H. L. Ingraham, M. Hilburg, the relief committee in that city, and by them duly received and distributed.

In May, 1880, bacon and corn-meal to the value of \$86.93 were issued by order of the commanding officer of Fort Clark, Texas, to citizens of Bracket, Tex., left destitute by a storm at that place. This issue was subsequently approved by the honorable Secretary of War.

In addition to the above issues, 3,022 rations were issued to destitute citizens at various posts, the issues being as a rule made by order of post commanders upon their own responsibility, they relying upon the circumstances in each case stated in the order for the issue, that the Secretary of War will approve them; if not so approved, the cost of the stores are charged to the officer ordering the issue.

The following letter from the Adjutant-General of the Army indicates the views of the War Department on the subject.

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,  
Washington, September 30, 1873.

SIR: Referring to your indorsements of the 26th ultimo and 7th instant, forwarding communications from the commanding officers of Forts Garland, Colo., and McPherson, Nebr., on the subject of issuing rations to destitute persons at frontier posts, I



have the honor to communicate for the information and guidance of those concerned the following views of the Commissary-General of Subsistence, which are approved by the Secretary of War:

"The current appropriations for the subsistence of the Army are so closely cut down to the actual wants of the Army that there is no margin for the exercise of liberality in the issue of subsistence stores to those for whom there is no provision of law.

"All such applications for issues must of necessity be declined, except in those overruling demands of humanity where starvation or extreme suffering shall move the commanding officer to assume the responsibility to make limited issues—he trusting to the circumstances, to be fully stated in his order for the issue, that the Secretary of War will sustain his action. It is not deemed that any executive authority can, in advance of occurrence of the special occasions of necessity, properly give orders for or regulate such issues, as this would transcend the provisions of law."

I am, sir, very respectfully, your obedient servant,

E. D. TOWNSEND,  
*Adjutant-General.*

To the COMMANDING GENERAL,  
*Military Division of the Missouri, Chicago, Ill.*

Issues of 2,505 rations have been made to citizen prisoners confined at military posts.

#### "ACTING COMMISSARIES OF SUBSISTENCE" AND "ACTING ASSISTANT COMMISSARIES OF SUBSISTENCE."

The organization of the Subsistence Department was fixed by the sixteenth section of the act entitled "An act to increase and fix the military peace establishment of the United States," approved July 28, 1866, and all laws and parts of laws in conflict with the provisions of the act were repealed by the thirty-eighth section.

Among the laws so repealed was that portion of the act of March 2, 1821 (section 8), which authorized as many assistant commissaries of subsistence, not exceeding 50, as the service might require, to be taken from the lieutenants of the line.

The appointment of officers as "assistant commissaries of subsistence" was not provided for by the act of July 28, 1866, and no law has since been passed authorizing such appointments.

Section 1261 Revised Statutes, however, which fixes the pay of officers of the Army, allows to an "acting assistant commissary one hundred dollars a year in addition to pay of his rank," thus granting a compensation to an "acting assistant," while an "assistant" commissary is unknown to the law. "Acting assistant commissaries," indeed, are nowhere mentioned in the law, except in section 1261 above referred to, under which officers of the line, &c., in the performance of subsistence duty in connection with troops, have been allowed the \$100 per year.

The Commissary-General of Subsistence, in his annual report of October 19, 1867, expressed the opinion that "it is very desirable that this grade of subsistence officers (viz, assistant commissaries of subsistence) be restored to the service." In this opinion I concur, and would respectfully recommend that Congress be requested to authorize the Secretary of War to appoint from the grade of lieutenant, on the recommendation of the Commissary-General of Subsistence, as many "assistant commissaries of subsistence" as the service may require, not exceeding 50; such officers, while performing duty as assistant commissaries of subsistence, to be paid \$10 per month, in addition to the pay of their rank, and to hold their appointments until canceled by order of the Secretary of War, or by their promotion to the grade of captain. I would also recommend that it be provided by law that where there is no assistant commissary at any garrisoned post, or with any command, the commanding officer thereof may detail an officer to act as assistant commissary for the post



or command, who, if a lieutenant, shall be entitled, while performing said duty, to the pay of an assistant commissary of subsistence; and that officers making such details shall forthwith report them to the Commissary-General of Subsistence.

Compensation for performance of the duty of assistant commissaries is thus limited to lieutenants by my recommendation, because if allowed to mounted officers of the rank of captain, or to higher grades, the aggregate pay of such individual officers would exceed that of the individual officers of the Subsistence Department of corresponding grades, which, I think, should not be allowed.

#### COMMISSARY-SERGEANTS.

The number of commissary-sergeants for the pay of whom an appropriation was made during the last fiscal year was but 147, while the number authorized by law is "not to exceed one for each military post or place of deposit of subsistence supplies." In the appropriation for the current year the number for whose payment appropriation is made is not limited by special appropriation, only by the general proviso that the number of enlisted men shall not exceed 25,000. This I consider preferable to limiting the number specially by appropriation, as the number required must depend upon the exigencies of the service.

As a rule, the sergeants in service have performed their duties with zeal, ability, and honesty, but I regret to state that two or three have improperly disposed of some of the subsistence supplies which it was their duty under the law to receive and preserve under the direction of the proper officers of the Subsistence Department.

From a careful examination of all the facts submitted to this office in the cases referred to, I am of the opinion that most if not all of the losses might have been prevented had not the officers responsible for the supplies virtually abdicated their duties and remitted them into the hands of the commissary-sergeants. The responsibility for such losses rests with the officers who neglected their duties, and they will be held to a strict accountability for the losses resulting from such neglect.

While by General Orders No. 115, Headquarters of the Army, Adjutant-General's Office, series of 1879, it was provided that "commissary-sergeants are to be considered as belonging to the non-commissioned staff of the post, and will rank with ordnance-sergeants according to the date of their warrants," from reports received at this office it appears that quarters are not assigned to them in accordance with their rank and the importance of their positions. I urgently recommend that an order be issued requiring commanding officers to assign to the commissary-sergeants at their posts appropriate quarters and in accordance with their rank. The position of commissary-sergeant is one of the most important held by enlisted men of the Army, and those who fill the position should be treated with the consideration which their rank and the importance of their position warrants and the best interests of the service require.

It is sometimes found that enlisted men who have been recommended for, and appointed to, the position of commissary-sergeant are not suited for the position, although entirely capable of performing the duty of sergeants of the line, from which they have been promoted: There is no authority of law to return such men to the line, and they must remain in their positions as commissary-sergeants until the expiration of their enlistment or be discharged the service. To retain them in service as commissary-sergeants is not just to the government, while to discharge

them from service before the expiration of their re-enlistment is hardly just to the sergeants. I therefore recommend the passage of an act authorizing the Secretary of War, upon the recommendation of the Commissary-General, to reduce to the ranks and assign to companies of the line such commissary-sergeants as may be found incapable of properly performing the duties of commissary-sergeant, but whose general reputation as to character and qualifications warrant the belief that they are fitted to perform the duties of the positions from which they were appointed, viz, "sergeants of the line."

#### ARMY COOKING.

Since my last annual report, fifteen hundred copies of the "Manual for Army Cooks," compiled from the report of a board of officers appointed upon the recommendation of the Surgeon-General and Commissary-General of Subsistence, by General Orders No. 117, Headquarters of the Army, Adjutant-General's Office, series of 1877, have been printed, and a copy sent to each company in the Army. This manual has met with a very favorable reception, and I respectfully recommend that Congress be requested to appropriate \$1,000 for the purpose of printing for distribution to the Army and militia a further supply of the manual.

I invite the attention of the honorable Secretary of War to the following extract from my last annual report, and urgently recommend that the attention of Congress may be invited to the subject, as one of the utmost importance, both in an economical and sanitary point of view:

#### ARMY COOKS AND BAKERS.

On the 8th of November, 1876, I stated, in a communication to the honorable Secretary of War:

"I am of the opinion that the efficiency of the Army would be materially increased, and desertions lessened, were a cook enlisted for each company with extra pay, say \$4 in excess of the pay of a private, and schools for the instruction of cooks established at the recruiting depots at Fort Columbus, N. Y., and Columbus Barracks, Ohio."

In my annual report for the year 1876, I stated:

"I also think that bakers should be specially enlisted, paid extra-duty pay, say \$4 per month, and assigned to posts as commissary-sergeants. I recommend that should schools for cooks be established at recruiting depots, bakers should also be instructed at the same schools."

I again invite the attention of the honorable Secretary of War to this subject in connection with the following extract from the report of the board on Army cooking, convened by General Orders No. 117, Headquarters of the Army, Adjutant-General's Office, series of 1877:

"The Army needs the enlistment of men who have an aptitude for cooking, and the establishment of a school for their education in the economy of the kitchen. \* \* \*

"Extra compensation is allowed to enlisted men when on duty as mechanics, artisans, and laborers when performing such work, but none to the company cook, whose duty, if conscientiously done, is the most onerous performed by the enlisted men. Eight hours is the time fixed for the labor of the extra-duty men, who are rated and paid as such. The duties of the competent and conscientious company cook commence two hours before reveille, and frequently are not concluded before tattoo. The wear and tear of the clothes of a company cook is double that of any enlisted man in the same company, yet the cook receives no extra compensation therefor, whilst the carpenter, blacksmith, or laborer detailed from the same company does.

"An important aid to good soldiering is good cooking. This cannot be obtained without good cooks, and good cooks cannot be obtained without education and adequate compensation. If one company cook, while actually performing duty as such, was allowed 50 per cent. advance on his clothing allowance, and a monetary compensation of 30 per cent. per day, to be paid either from the Subsistence Department or the Quartermaster's Department, a class of men would be secured to the Army who would economically use the ration, cook it acceptably, and be anxious to retain his position for the extra compensation it brings, whilst at present he is only glad to be relieved from kitchen duty for lighter work."

I respectfully urge the Secretary of War to invite the attention of Congress to this subject, believing the subject one of the utmost importance in connection with the health, comfort, and efficiency of the enlisted men of the Army.

In connection with the subject of Army cooking, it is suggested that at the annual encampments of the State militia it would be well if the troops were furnished with the Army ration by the States, and it cooked for the companies by men detailed from the companies for the purpose. This might be done by the assistance and under the supervision of Army cooks from the Army cooking schools, should such be established and the State authorities so desire.

The importance to volunteers of a knowledge of cooking the Army ration, and accustoming themselves to its use, will be appreciated by those who have had experience with volunteers during their first service in the field.

At some if not all the encampments of State militia the food of the troops is furnished by caterers specially employed for the purpose; any articles of diet are allowed, and the cost in some cases is stated to have been \$1.50 per day, while the cost of the Army ration is less than 20 cents. Disregarding, however, the cost of the food, I consider it a matter of great importance that militia in camps of instruction should learn what the Army ration is, and how it should be cooked and served, especially in the field.

#### SUBSISTENCE OF RECRUITING PARTIES AND RECRUITS.

Accounts for the fiscal year ending June 30, 1880, show a disbursement of \$24,612.11 for the subsistence of recruiting parties and recruits; the number of rations paid for being 51,325, and the average cost per ration 47.953 cents.

#### ACCOUNTS AND RETURNS.

There were received during the fiscal year ending June 30, 1880, from 468 officers performing duty in the Subsistence Department, the following accounts and returns, viz:

Accounts-current.....	2,607
Returns of provisions.....	2,246
Returns of commissary property .....	856
Total received .....	5,709

During the same period there were examined in this office, and forwarded to the Third Auditor (the returns for file and the accounts current for final settlement), the following:

Accounts-current.....	2,507	accompanied by 34,205 vouchers.
Returns of provisions .....	2,150	accompanied by 29,086 vouchers.
Returns of commissary property .....	842	accompanied by 2,537 vouchers.
Total .....	5,499	accompanied by 65,828 vouchers.

In addition to the above, returns of official postage-stamps to the number of 714, accompanied by 2,335 vouchers, have been examined and filed.

The necessity for an increase of clerical force in the accounts and returns branch of this office will be evident from an examination of the above.

In connection with the above, there were 4,774 letters written and 1,121 referred by endorsement, and 611 papers copied.

## CLAIMS.

*Act of July 4, 1864 (Section 300 B, Revised Statutes).*—At the commencement of the fiscal year ending June 30, 1880, there were on file in this office, awaiting examination, 1,066 claims under the third section of the act of July 4, 1864, and the acts and joint resolutions supplementary to said act, and during the year 1,134 more were received, making in all 2,200 to be acted upon. Formal decisions were rendered during this period in 89 cases of this class of claims. Of these 45, amounting to \$9,453.72, were allowed and recommended to the Third Auditor of the Treasury for payment, and 44, amounting to \$39,619.19, were rejected. The number decided embraced 22 cases re-examined upon additional evidence, of which 13 were allowed and 9 again rejected.

*Joint resolution of July 25, 1866, and third section of act of March 2, 1867.*—At the commencement of the fiscal year there were on file in this office 1,531 claims for commutation of rations to Union soldiers while held as prisoners of war, and during the year 1,998 claims were received, making a total of 3,529 claims of this class for examination. Of these 1,341 were not reached for examination; 1,303 were partially examined; 885 examined and decided, of which 629 were rejected, and 256, amounting to \$8,789.13, were allowed and recommended to the Third Auditor of the Treasury for payment.

*Miscellaneous claims.*—In addition to claims under the above mentioned special acts of Congress, 389 miscellaneous claims, amounting to \$15,181.35, were received during the year, of which 73, amounting to \$3,856.73, were recommended for payment; 79, amounting to \$5,279.78, were rejected; 180, amounting to \$2,868.27, were partially examined, and 57, amounting to \$2,405.24 (estimated), were not reached for examination. At the commencement of the fiscal year 405 old claims were on hand for examination, of which 70 cases were completed and allowed in the sum of \$1,763.03, and 20, amounting to \$396.39, rejected. Of rejected (old) claims of this class, 20 were re-examined upon additional evidence, 10 of which, amounting, to \$369.50 were allowed, and 10, amounting to \$213.62, again rejected.

*Letters and indorsements.*—In connection with the three classes of claims above mentioned, besides making briefs of the evidence and extended examinations of official records and reports, 7,213 letters and indorsements were written.

The further presentation of claims under the act of July 4, 1864 (sec. 300 B, Rev. Stat.), after January 1, 1880, was barred by the third section of the act of March 3, 1879 (20 Stat., 650). The wisdom of this legislation, after the lapse of so long a period since the war, cannot be questioned. Some further legislation in respect to the settlement of the pending claims of this class now seems necessary, by operation of which the right of claimants to a rehearing of their cases in this office shall at some time cease and be determined. There is at present no limitation, either by law or regulations, which hinders or estops claimants from pressing upon the Commissary-General, upon the strength of new papers filed for the purpose, or upon the probative force of old ones, the reconsideration of claims, whenever, and as often as, they may be unfavorably decided by himself or may have been disallowed by his predecessors. Existing laws do not empower him to terminate further proceedings in claims which, after reasonable opportunities given to claimants, and careful examination by him, are not found to merit his recommendation to the accounting officers of the Treasury for settlement.



I, therefore, respectfully recommend that, if the examination of this class of claims is to be continued in the hands of the Commissary-General of Subsistence, Congress may be requested either to set some future day for the termination of all action by this office on claims of this class or to provide by law that no claim under section 300 B, Revised Statutes, shall be taken up for formal examination by the Commissary-General of Subsistence until after notice from claimant that the same is ready for such examination, or, if such notice is not received, the giving of sixty days' notice to claimants by the Commissary-General, and that upon being once formally examined, and disallowed by the Commissary-General, after notice, such claim shall not again be opened or heard by him.

Touching the general subject of this class of claims, however, I hereby renew my recommendation that their examination may be transferred to some other tribunal to be established for the purpose. As stated in my annual report for 1876—

The task originally very difficult, of investigating and deciding these cases with equity and justice becomes daily more so from the passing away by deaths and removals, and from the imperfect memories, after lapse of so long a period, of so many officers and others alleged to have taken or received the stores or to have knowledge of them, \* \* \* while these very difficulties but add security, if not increased facilities, to the prosecution of fraudulent claims, \* \* \* and a proper examination of them requires more time and attention than the Commissary-General is able to give them, without neglecting other and, in my opinion, more important duties appertaining to the Subsistence Department, and he should be relieved from this duty.

#### CLERICAL AND OTHER FORCE IN THE OFFICE OF THE COMMISSARY-GENERAL OF SUBSISTENCE.

There are now employed in this office, in addition to the clerks, assistant messenger, laborers, and watchmen, specially provided by law, five enlisted men as clerks, one assistant messenger, and one laborer. The experience of the past three years has demonstrated that this force is not sufficient to meet the demands of the public service. I deem it my duty, therefore, to particularly invite the attention of the Secretary of War, and through him the attention of Congress, to the matter, and to urge a reorganization and temporary increase of the force.

During the last fiscal year 2,607 accounts-current and 2,246 returns of provisions were received at this office, but it was found impracticable to examine for settlement more than 2,507 of the former and 2,150 of the latter. At the rate at which it has been found practicable, for the past three years, to examine the claims presented under the act of July 4, 1864, the examination of those now on file, conducted in connection with other classes of claims and the ordinary current work of that branch, cannot, with the clerical force now available, be completed much before the end of the present century.

For these reasons, therefore, I recommend that Congress may be urgently requested to allow for this office the following number and grade of employés, in lieu of the numbers and grades now authorized and employed, viz: One chief clerk; 2 clerks class 4; 4 clerks class 3; 5 clerks class 2; 12 clerks class 1; 5 clerks class \$1,000 (temporary); 1 messenger; 1 assistant messenger; 2 watchmen; 2 laborers. This force is absolutely required to perform the ordinary duties of the office, the five temporary clerks at \$1,000 being required in connection with the examination of claims (now greatly in arrears), and to be retained only until such time as those claims are so far reduced in number as to be within the capacity of the regular force.



This reorganization of office *personnel* contemplates the discontinuance of the use of enlisted men as now resorted to. I believe that the necessary force should all be civilians, and that no part of the appropriations for the support of the Army should be devoted to the payment of enlisted men for the performance of duties that are wholly of a civil nature.

Justice to officers whose accounts and to claimants whose claims are to be examined imperatively demands that the clerical force in this office should be increased. The importance of the duties, the amount of labor performed, and the inadequacy of the pay now allowed render it an act of duty upon my part to recommend, as I have done above, that the clerical force permanently authorized shall be the same in numbers and compensation as was fixed in 1874, and continued in 1875 and 1876.

\* \* \* \* \*

On the 16th of June, 1880, Capt. Charles McClure, commissary of subsistence, was, upon my recommendation, instructed by the Secretary of War to proceed to Cincinnati, Ohio, for the purpose of attending the Millers' International Exhibition, and carefully examining the flour and mills on exhibition, and ascertaining the process of the manufacture of flour in all its details, so far as they were shown, and to make a detailed report of the result of his examination to the Commissary-General of Subsistence. The duty thus devolved upon Captain McClure was satisfactorily performed, and a detailed report of his observations submitted to this office.

Very respectfully, your obedient servant,

R. MACFEELY,  
*Commissary-General of Subsistence.*

The honorable the SECRETARY OF WAR.

## REPORT OF THE SURGEON-GENERAL.

WAR DEPARTMENT,  
SURGEON-GENERAL'S OFFICE,  
*Washington, October 1, 1880.*

SIR: have the honor to submit the following statement of finances and general transactions of the Medical Department of the Army for the fiscal year ending June 30, 1880:

\* \* \* \* \*

### ARTIFICIAL LIMBS AND APPLIANCES.

There were furnished during the fiscal year, in kind, trusses, 829; artificial legs, 4; arms, 4; appliance for disabled leg, 1: by commutation, legs, 84; arms, 144; hands, 3; feet, 6; appliances for legs, 166; for arms, 295.

### MEDICAL AND HOSPITAL SUPPLIES.

The total amount expended during the fiscal year for medical and hospital supplies alone was \$120,902.65, while the cost of the medical and hospital supplies actually issued during the year was \$175,684.62. It will thus be seen that had it not been for the fact that the Medical Department had on hand a surplus stock of certain supplies left over

from the war, the amount appropriated by act of June 23, 1879, would have been inadequate to meet the actual requirements of the service.

The old stock of supplies referred to has become comparatively exhausted, and I have the honor to report that in my opinion an appropriation of \$250,000 will be required for the use of the Medical Department for the fiscal year ending June 30, 1882, for the purchase of medical and hospital supplies, for expenses of purveying depôts, for pay of employés, for pay of private physicians and nurses employed in emergencies at posts or stations (for which no other provision is made) and for other miscellaneous expenses of the Medical Department.

#### HEALTH OF THE ARMY DURING THE FISCAL YEAR ENDING JUNE 30, 1880.

The monthly reports of sick and wounded received at this office up to September 15, represent an average mean strength of 22,100 white, and 2,368 colored, troops.

Among the white troops the total number of cases of all kinds reported as taken on the sick list was 39,111, being at the rate of 1,770 per 1,000 of mean strength.

Of this number, 33,562, or 1,519 per 1,000 of strength, were taken on sick report for disease, and 5,549, or 251 per 1,000 of strength, for wounds, accidents, and injuries of all kinds.

The average number constantly on sick report during the year was 986, or 45 per 1,000 of mean strength. Of these, 767, or 35 per 1,000 of strength, were constantly under treatment for disease, and 219, or 10 per 1,000 of strength, for wounds, accidents, and injuries.

The total number of deaths from all causes reported among the white troops was 219, or 10 per 1,000 of mean strength. Of these, 126, or 6 per 1,000 of strength, died of disease, and 93, or 4 per 1,000 of strength, of wounds, accidents and injuries.

The proportion of deaths from all causes to cases treated was 1 to 179.

The total number of white soldiers reported to have been discharged from the service on "surgeon's certificate of disability" was 734, or 3 per 1,000 of mean strength.

Among the *colored troops* the total number of cases of all kinds reported was 4,052, or 1,711 per 1,000 of mean strength. Of these, 3,581, or 1,512 per 1,000 of strength, were cases of disease, and 471, or 19 per 1,000 of strength, were wounds, accidents, and injuries.

The average number constantly on sick report was 89, or 37 per 1,000 of strength; of whom 72, or 30 per 1,000 of strength, were under treatment for disease, and 17, or 7 per 1,000 of strength, for wounds, accidents and injuries.

The total number of deaths of colored soldiers reported from all causes was 46, or 19 per 1,000 of mean strength. Of these, 21, or 9 per 1,000 of strength, died of disease, and 25, or 10 per 1,000 of strength, of wounds, accidents and injuries.

The proportion of deaths from all causes to cases treated was 1 to 88.

The total number of colored soldiers reported to have been discharged on "surgeon's certificate of disability" was 58, or 24 per 1,000 of mean strength.

#### WORK PERFORMED IN THE RECORD AND PENSION DIVISION.

Shortly after the commencement of the fiscal year work in this division began to fall into arrears, in consequence of increase in the number of demands for information, due to the operation of the act of

Congress, approved January 25, 1879, granting arrears of pensions, &c. I called attention to this subject in my last annual report, and urgently represented the necessity of an increase in the number of clerks authorized by law. This recommendation was favorably acted upon by Congress; but as the act by which the additional clerks were authorized did not become a law until the 16th of March, 1880, the increase in the number of cases reported upon during the fiscal year ending June 30, 1880, was of course by no means so great as it will be during the year now progressing.

As anticipated, the number of new official demands made during the fiscal year for information as to the cause of death in the case of deceased soldiers and the hospital record of invalids proved very much larger than during previous years. The average number of such demands during the previous ten years had been 20,580 annually; the number during the fiscal year terminating June 30, 1879, was 22,339, while the number during the fiscal year terminating June 30, 1880, was 39,241, being an increase of 76 per cent. over the previous fiscal year, and of 91 per cent. over the annual average for the previous ten years.

Of this large number of new cases 36,895 were from the Commissioner of Pensions, 2,138 from the Adjutant-General of the Army, and 208 from miscellaneous sources. Besides these new cases there were, at the commencement of the fiscal year, 4,000 cases remaining unanswered, making a total number of 43,241 cases to be searched during the year.

Search was made and replies furnished to the proper authorities in 36,277 of these cases, viz: 33,569 to the Commissioner of Pensions, 2,497 to the Adjutant-General of the Army, and 211 to miscellaneous inquirers.

On the 1st of July, 1880, the number of cases remaining on hand unanswered was 6,964. With the clerical force at present engaged upon this work the number of cases that can be disposed of during the current fiscal year will of course be considerably larger than during the year just terminated, but, as the number of new demands continues undiminished, I would recommend that the present clerical force be continued unchanged during the next fiscal year.

Besides the work of searching, a certain amount of necessary current record work is annually performed in this division. During the past fiscal year 2,594 monthly reports of sick and wounded have been received from the medical officers in charge of the various posts and stations. These have been examined, consolidated on statistical sheets for use, and the deaths and discharges entered in the appropriate alphabetical registers. Nine hundred and thirty-five monthly meteorological reports were received from medical officers, which have been transmitted to the Chief Signal Officer of the Army for his use, and 947 reports of the medical examination of recruits were received and filed, it not being possible, in view of the present demands upon the clerical force of the division, to undertake their discussion at the present time.

#### DIVISION OF SURGICAL RECORDS.

The examination of the surgical reports of the medical officers of the Army, the tabulation of the data contained therein, the continuation of the surgical portion of the Medical and Surgical History of the War, and the publication of the list of the specimens in the anatomical section of the United States Army Medical Museum, have formed the principal part of the work in this division of the Surgeon-General's Office.

In Class V of the monthly reports of the sick and wounded for the

fiscal year ending June 30, 1880, are recorded 6,020 cases of wounds, accidents and injuries in a mean strength of the Army of 24,468 men. One hundred and eighteen deaths were occasioned by wounds received in action or from other violent causes, a proportion of 4.8 per 1,000 of mean strength.

Four thousand one hundred and thirty-four official reports of medical officers in charge of post hospitals or with detachments of troops or expeditions against hostile Indians were received. Sixteen hundred were regular quarterly reports, 83 were special reports, 21 were reports of casualties, and 2,430 were reports of a miscellaneous character.

Casualties of 17 engagements with hostile Indians were reported during the fiscal year ending June 30, 1880.—1. At Beaver Creek, Montana, July 17, 1879, the advance guard of Col. N. A. Miles's command, under Lieut. William P. Clark, Second Cavalry, had an engagement with Sioux Indians. Assist. Surg. A. C. Girard reported 3 scouts killed, and 1 scout and 2 men of the Second Cavalry wounded. 2. Acting Assist. Surg. P. Brummund reported a corporal and a private of the Tenth Cavalry wounded in a skirmish between United States troops under Capt. M. L. Courtney, Twenty-fifth Infantry, and a band of Indians at Salt Lake, Texas, twenty miles southwest of the Guadalupe Mountains, July 25, 1879. 3. An expedition under Lieut. H. Catley, Second Infantry, was attacked by Indians at Big Creek, Idaho, July 29, 1879. Acting Assist. Surg. E. J. Pring reported 2 privates of the Second Infantry wounded. 4. On August 20, 1879, another engagement took place on Big Creek, Idaho, between Indians and a detachment of United States troops under Capt. R. F. Bernard, First Cavalry. Assist. Surg. T. E. Wilcox reports that a private of the Second Infantry received a shot fracture of the lower third of the femur. Amputation in the middle third of the thigh was at once performed, but the patient died on the same day, August 20, 1879. 5. On September 5, 1879, Companies C and G, Ninth Cavalry, under command of Capt. C. D. Beyer, left Fort Bayard, New Mexico, on a scout against the Apache Indians. Acting Assist. Surg. Lewis Kennon gives the following account of the expedition: "We marched in a southeastern direction until the morning of the 18th, when we came up to Captain Dawson, Ninth Cavalry, with Companies A and B engaged and nearly surrounded by Indians, near the head of the Rio de los Animas. One wounded man, a private, was gallantly brought away by a young officer of the Ninth Cavalry, Lieut. M. W. Day, in the face of a steady fire of 50 rifles. During the retreat in the darkness for some sixteen miles, the wounded were carried astride of pack mules, each one led by a soldier. It was impossible to adopt any other method less painful. It was out of the question to improvise any form of travois, and carrying a man in a blanket at the rate of speed we found necessary was excluded from consideration." The casualties in this engagement consisted of 3 killed and 2 wounded: one of the latter died two days after the injury. 6. An expedition commanded by Maj. T. T. Thornburgh, consisting of Companies F and D, Fifth Cavalry, E, Third Cavalry, and Fourth Infantry, was attacked by Ute Indians at the crossing of Milk River, Colorado, about one hundred and sixty miles south of Rawlins, and about thirty miles from the White River Agency, September 29, 1879. The fight began in the forenoon and continued until dark. The reports of Surgeon S. M. Horton, Assist. Surg. J. P. Kimball, and Acting Assist. Surg. R. B. Grimes give the number of killed as 10, and of wounded as 33. Among the killed was the commander of the expedition, Major Thornburgh, and among the wounded were Capt. J. S. Payne, Lieut. J. V. S. Paddock, and Acting

Assist. Surg. R. B. Grimes. The troops were driven back to the wagon-train, where they intrenched. Protected by hastily-constructed rifle-pits, they remained besieged until October 6, when they were relieved by Col. W. Merritt. While behind the intrenchments, on October 2, 1879, 2 more privates were wounded. A number of engagements were fought in New Mexico between Victoria's band of Apache Indians and a detachment consisting of companies of the Sixth and Ninth Cavalry, and Company A, Apache Scouts, under the command of Maj. A. P. Morrow, Ninth Cavalry, viz: 7. On September 30, 1879, at the headwaters of the Rio Cuchillo Negro, Assist. Surg. R. E. Smith reports 2 privates of the Ninth Cavalry shot through the brain and instantly killed. 8. On October 26 and 27, at Grozman Mountain, an Apache scout was wounded. Another Apache scout and a private of Company A, Sixth Cavalry, reported missing by Acting Assist. Surg. William M. Handy, are supposed to have been killed. 9. On January 13, 1880, Acting Assist. Surg. W. H. Comegys reported an engagement on the Rio Perche, New Mexico, in which 1 sergeant was killed and 1 Apache scout wounded. 10. In an engagement on January 17, 1880, in the San Mateo Mountains, New Mexico, two scouts were wounded, and Lieut. J. H. French, Ninth Cavalry, was killed by a shot through the head; reported by Acting Assist. Surg. W. H. Comegys. 11, 12. The same official gives an account of an engagement on January 30, 1880, in the Carvalho Mountains, New Mexico, in which a sergeant of the Ninth Cavalry was slightly wounded, and of an engagement on the side of the San Andreas Mountains, New Mexico, on February 3, 1880, in which an Apache scout was killed and 4 privates of the Ninth Cavalry were wounded. 13. In Montana Territory, on Pumpkin Creek, on February 7, 1880, a scouting party of 10 men of the Second Cavalry and 10 Indian guides attacked a band of Sioux supposed to belong to Sitting Bull's band. Assist. Surg. A. C. Girard reported 1 private killed and another wounded. 14. The same officer reports that in an engagement eighteen miles west of Rosebud River, Montana Territory, between a detachment of Indian scouts and hostile Sioux, on March 8, 1880, 2 scouts were instantly killed. There was no medical officer with the detachment at the time of the engagement. 15. A severe fight occurred on the east side of the San Andreas Mountain, New Mexico, on April 6 and 7, 1880, between Mescalero Apaches and a portion of Col. E. Hatch's command. A captain and 8 enlisted men of the Ninth Cavalry were reported wounded by Acting Assist. Surg. William N. Handy. 16. On April 1 a sergeant of the Second Cavalry was shot through the head and instantly killed on O'Fallon's Creek, Montana, in an action with hostile Indians, as reported by Acting Assist. Surg. T. H. Terry. 17. In a fight with Victoria's band on Ash Creek, Arizona, May 7, 1880, a sergeant of the Sixth Cavalry was shot through the body. He died the same night. Reported by Acting Assist. Surg. J. L. Ord.

To the 7,828 cases of injuries and operations reported in the Army of the United States from the date of the publication of Circular 3, in 1871, to the close of the fiscal year ending June 30, 1879, have been added, during the past year, 1,034 cases, making a total of 8,862 cases, viz: 2,499 injuries of the head, 141 of the face, 65 of the neck, 616 of the trunk, 1,576 of the upper extremities, 1,050 of the lower extremities; 2,014 simple fractures, luxations and sprains, and 901 injuries of a miscellaneous nature.

*Surgical statistics of the war.*—Through correspondence with medical officers of the civil war, from reports of pension examiners, and from surgical journals and publications, additional data were obtained in



3,808 cases of injuries. Searches among the records of the Pension Office and of the Record and Pension Division of this office gave further information in 1,727 and 2,081 cases respectively.

#### PROPERTY DIVISION.

The following is a summary statement of the work performed in the property division of this office during the fiscal year ending June 30, 1880 :

\* \* \* \* \*

The contributors to the Army Medical Museum were 10 surgeons, 33 assistant surgeons, 8 acting assistant surgeons, 4 hospital stewards, 3 line officers, and 53 civil practitioners.

The number of visitors registered at the Army Medical Museum during the fiscal year ending June 30, 1880, was 34,111. Seventy-six negatives and 1,115 photographic prints of surgical subjects were made, and 147 of the latter were distributed among contributors to the Army Medical Museum and to the surgical records of this division.

Accurate measurements were taken of 143 human crania and 22 human skeletons.

The number of specimens in the anatomical section of the Army Medical Museum having materially increased since the publication of the *Check List of Preparations and Objects in the Section of Human Anatomy of the United States Army Medical Museum for use during the International Exhibition of 1876*, Washington, 1876; 31 skeletons, 519 crania, and 10 preparations of a miscellaneous character having been added, a *List of the Specimens in the Anatomical Section of the Army Medical Museum*, 8°, pp. 194, was prepared under the direction of the curator of the Museum, Surgeon George A. Otis, U. S. A., for distribution among the medical officers of the Army, and anatomical students and correspondents.

*Medical and Surgical History—Third Surgical Volume.* Eighty-two drawings on wood and 96 wood engravings for the Third Surgical Volume were prepared. One hundred and eighty-two pages of this volume were completed under the supervision of Surgeon George A. Otis, U. S. A., advancing the work from page 200 to page 382 inclusive.

#### LIBRARY.

About 2,500 volumes and 3,500 pamphlets have been added to the library during the past year, making the total number about 51,500 volumes, and 57,000 pamphlets.

The work upon the Index Catalogue has been steadily carried on and the stereotype plates of Volume I were completed in the month of July, 1880.

An edition of 1,500 copies of this volume has been printed and distributed, and the first part of Volume II is just going to the press.

An estimate has been forwarded for printing Volumes III and IV of the Catalogue, and it is hoped that this may be granted in order that the progress of the work may not be interrupted.

#### A NEW FIRE-PROOF BUILDING A NECESSITY FOR THE ARMY MEDICAL MUSEUM AND LIBRARY.

I would respectfully invite attention to the over-crowded and unsafe condition of the building Nos. 509-11, Tenth street, N. W., now occu-

pied by the Record and Pension Division, the Division of Surgical Records and the library of this office, as well as by the Army Medical Museum. By the continued growth of these valuable collections the space available for their preservation has become quite inadequate not merely for their proper display, but even for satisfactory storage. In the building now occupied, these collections are continually exposed to the danger of destruction by fire. This building is surrounded by inflammable houses and sheds, on private property over which the officer in charge can of course exercise no control whatever, and which are in immediate contact with its north and south wings. These wings are not fire-proof, and although the main building is provided with three fire-proof floors, its roof is not fire-proof.

The sad experience of the Smithsonian Institution in 1865, and of the Patent Office in 1877, has demonstrated that the perils to which collections preserved in such a building are exposed in case of fire, are not materially diminished by the fire-proof floors beneath; but in both the cases referred to the extent of the damage was limited to the upper story by the substantial character of the walls and floors. The walls of the Tenth street building are not only weak, but much out of plumb, so that it is to be feared that destruction by fire of the roof would not only involve the whole Museum Collection in the third story, but, by the fall of at least a portion of the walls, the destruction of the contents of the lower stories, including the library and the records, would result. The most probable source of danger is from accidental fire in the adjoining private property. Such a fire actually occurred in January, 1875, but was fortunately subdued by the exertions of the employés of our building before damage was done.

I therefore earnestly recommend an appropriation for a new fire-proof building adequate for the present needs and reasonable future expansion of all the collections now stored in the unsafe building on Tenth street. Such a building should be absolutely fire-proof; but no expenditure for mere architectural display is required. I find on inquiry that a suitable structure can be erected at a cost not to exceed \$250,000.

#### MISCELLANEOUS.

The requirements of the Army as to medical officers during the past year have been as follows:

Number of permanent posts.....	154
Number of temporary posts and substations .....	21
Total.....	175
Number of military expeditions in the field during the year.....	16

These expeditions required the services of 36 medical officers. There were also 116 medical officers reported to this office as having been on duty with scouting parties during the year.

The Army Medical Examining Board convened in New York City on the 7th of November, 1877, for the examination of assistant surgeons for promotion, and of candidates for appointment in the medical corps of the Army, has been continued in session throughout the past year, and since rendering my last report 8 candidates have been found qualified and approved by the Board, all of whom have been duly appointed and commissioned assistant surgeons, as have also the 2 approved candidates whose names had not been submitted for appointment at date of my last report.

The following is a recapitulation of the work thus far performed by the Army Medical Examining Board :

Number of assistant surgeons examined for promotion .....	35
Number of candidates for appointment in the medical corps invited to appear for examination .....	185
Number of candidates found qualified .....	21
Number of candidates rejected .....	40
Number of candidates who withdrew after partial examination .....	83
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Total number examined .....	144
Number of candidates who failed to appear for examination .....	14
Number of candidates who declined to appear for examination .....	16
Number of candidates remaining to be examined .....	11
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Total number invited but not examined .....	41

At the date of my last report there were 14 vacancies in the medical corps—2 in the grade of surgeon and 12 in the grade of assistant surgeon. During the past year 1 surgeon, with the rank of colonel, 1 surgeon, with the rank of major, and 2 assistant surgeons have died, and 1 assistant surgeon has resigned; 1 surgeon, with rank of lieutenant-colonel, has been promoted to colonel, one surgeon, with the rank of major, has been promoted to lieutenant-colonel, and four assistant surgeons have been promoted to surgeon, with the rank of major, and 10 appointments in the grade of assistant surgeon have been made; leaving at the present time 9 vacancies in the grade of assistant surgeon.

There are at present 14 medical officers on sick leave of absence, 5 of whom have been incapacitated for active service and recommended for retirement by Army retiring boards, and 1 has been recommended to be brought before a retiring board with a view to his retirement from active service; 4 are on ordinary leave of absence after a tour of duty on the remote frontier: leaving 160 medical officers for duty.

The medical officers who have died during the past year are as follows:

Col. William J. Sloan, surgeon, at Saint Paul, Minn., March 17, 1880, and on duty as medical director at the headquarters of the Department of Dakota.

Maj. Jno. F. Randolph, surgeon, at Philadelphia, Pa., May 14, 1880.

Capt. Henry J. Phillips, assistant surgeon, at New York City, N. Y., October 10, 1879.

Capt. Augustus A. Yeomans, assistant surgeon, at Toronto, Can., May 19, 1880.

Col. William J. Sloan entered the service as an assistant surgeon July 12, 1837, was promoted to surgeon, with the rank of major, December, 20, 1855, and became surgeon, with the rank of lieutenant-colonel, June 26, 1876, and colonel, April 18, 1877. He was appointed colonel by brevet on March 13, 1865, "for faithful and meritorious service during the war," and brigadier-general by brevet on September 28, 1866, "for meritorious and distinguished service at several military posts in New York Harbor, where cholera prevailed." He served in Florida from time of his appointment to February, 1840; in Indian Territory to September, 1844; in Louisiana to August, 1849; at various posts in Florida to September, 1853; at Newport Barracks, Ky., to May, 1856; in New Mexico to October, 1860; at Fort Columbus, New York Harbor, and in medical director's office, New York City to June, 1862; as director of transports to September, 1862; medical director, Department of the

Northwest, to February, 1863; in medical director's office, New York City, to January, 1865; medical director, Department of the East, to October, 1866; chief medical officer, New York City, to May, 1869, medical director, Department of the South, to May, 1875; and as medical director, Department of Dakota, until the date of his death. The following remarks, made by Brig. Gen. Alfred H. Terry, commanding the Department of Dakota, in a general order announcing the death of Surgeon Sloan, are so full of truth and pay such an honorable tribute to the character of this most valuable and esteemed officer, that I repeat them now as conveying the real feeling entertained by all who knew well Surgeon William J. Sloan:

It would be impossible, within the limits of a general order to do justice to the services and to the professional ability of an officer such as Surgeon Sloan was. Equally difficult would it be to do justice to his character as a man. To the highest conception of the demands of duty and the loftiest sense of honor, he united very remarkable simplicity and directness of character and a most kindly and gentle nature. To great clearness and force of intellect and thorough mastery of his profession, he added administrative and executive ability such as is rarely equaled. During the long and distressing illness that preceded his death, his mind retained its accustomed vigor, and, although struggling with disease, he continued till the day preceding his dissolution to discharge every duty devolved upon him. He lived without an enemy. He died beloved and lamented by all who knew him.

Maj. John F. Randolph was appointed assistant surgeon December 24, 1855, and promoted to surgeon, with the rank of major, August 27, 1862; he was appointed lieutenant-colonel by brevet March 13, 1865, "for faithful and meritorious services during the war." He served in Oregon and California from time of entry into service until December, 1862; at Jefferson Barracks, Mo., to December, 1864; medical director, Department of the Missouri, to August, 1865; in charge of marine hospital, Saint Louis, Mo., to August, 1866; at Fort Wood, New York Harbor, to April, 1868; medical director, Fifth Military District, to August, 1868; medical director, Department of Louisiana, attending surgeon, headquarters Department of Louisiana, attending surgeon, New Orleans, in charge of medical purveying dépôt in New Orleans, and medical director, Department of the Gulf, to July, 1872; at Omaha Barracks, Nebr., Fort D. A. Russell, Wyo., and Camp Robinson, Nebr., to September, 1876; at Fort Trumbull, Conn., to April, 1878, when he was granted sick leave of absence, which continued to be his status until date of death.

Capt. Henry J. Phillips served as surgeon of the Fifty-third and One hundred and Second New York Volunteers during the war of the rebellion, and was appointed assistant surgeon in the Army October 28, 1866. He had been on sick leave of absence for four years prior to his death.

Capt. Augustus A. Yeomans was appointed assistant surgeon May 14, 1867, and had been on sick leave for nearly one year prior to his death.

The three medical officers last named had each been found incapacitated for active service by Army retiring boards and recommended for retirement.

JOS. K. BARNES,  
*Surgeon-General United States Army.*

The Hon. SECRETARY OF WAR,

## REPORT OF THE PAYMASTER-GENERAL.

WAR DEPARTMENT, PAYMASTER-GENERAL'S OFFICE,  
Washington, October 9, 1880.

SIR: I have the honor to submit my annual report of the transactions of the Pay Department of the Army for the fiscal year ending June 30, 1880.

Tabular statements, herewith submitted, show in detail the fiscal operations of the department for that year, summarily stated as follows, viz:

## RECEIPTS AND DISBURSEMENTS DURING THE FISCAL YEAR ENDING JUNE 30, 1880.

Balance in hands of paymasters, July 1, 1879.....	\$1,859,305 06
Amount received from the Treasury.....	12,569,500 00
Amount received from soldiers' deposits.....	477,174 44
Amount received from paymasters' collections.....	426,713 46

Total to be accounted for.....	15,332,692 96
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## Accounted for as follows:

## Disbursements:

To Regular Army .....	\$12,510,610 08
To Military Academy.....	201,153 39
To Treasury certificates (volunteers, freedmen, &c.).	273,028 58

Total disbursements.....	12,984,792 05
Surplus funds deposited in the Treasury.....	521,849 30
Paymasters' collections deposited in the Treasury..	426,713 46
Balance in hands of paymasters, June 30, 1880.....	1,399,338 15

Total accounted for.....	15,332,692 96
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The amount received during the year from soldiers' deposits will be seen to be \$477,174.44. The amount received for the previous year was \$370,770.38; an increase of \$106,406.06.

General Benjamin Alvord, my predecessor, was retired on the 8th of June, 1880, and I was commissioned Paymaster-General on the same day, and entered on duty June 22, 1880.

Having so late in the fiscal year assumed the control of the department, I must speak of its operations principally from the records. From these, however, I may confidently report that all its requirements have been faithfully executed, and that the Army has been regularly and promptly paid to the close of the fiscal year.

I respectfully invite your attention to the subject of pay to officers of the Army while on leave of absence.

The laws in reference to leaves were passed severally on March 3, 1863, June 20, 1864, May 8, 1874, and July 29, 1876. The two latter acts are modifications of the former. Under these laws an officer can receive a leave of thirty days each year—not to be cumulated more than four years—on full pay; and for any time in excess of that he is reduced to half pay. I cannot but regard the operation of these laws as harsh and unjust and very unequal. A very large proportion of the officers are stationed at remote posts in the West, and when a leave is obtained the whole or nearly the whole of the thirty days is often necessarily consumed in travel to any of the Atlantic cities—where most of the officers desire to go—and in returning to their posts. For the remainder of the time they are reduced to half pay, and this, with the heavy expense attending the journeys, is very onerous to them.



It is considered that the first two laws above cited were enacted as *war measures*, and the time has now fully come, in my judgment, when they should be done away with. I therefore earnestly recommend that Congress be requested at the approaching session to repeal them. The extent to which leaves should be granted may be safely left to the graded action and recommendation of the department and division commanders and the General of the Army and the decision of the Secretary of War.

The law now limits the number of paymasters' clerks to 54. It has repeatedly happened that, in consequence of special duty being required of a paymaster, as, for example, the payment of bounties, &c., one clerk is insufficient for the prompt performance of the duty. I would, therefore, recommend that the number be increased by law not to exceed 60, the additional or extra clerks to be employed under the special approval of the Secretary of War in each case.

\* \* \* \* \*

I append the report of Maj. A. B. Carey, paymaster, under whose immediate charge the payment of bounty, &c., due soldiers, both white and colored, has been made.

The law governing the payment to colored soldiers, or their heirs, requires the placing in their hands the amount of the claim in current funds, and involves the necessity of identifying claimants before payment is made. To provide for the expense attending these payments, there was appropriated by the act of March 3, 1879, \$4,000 for the fiscal year ending June 30, 1879, and \$10,000 for the fiscal year ending June 30, 1880. Of the first amount, \$1,818.46 was disbursed, and of the second, \$6,586.58, leaving an unexpended balance of \$5,595.02 on June 30, 1880.

No appropriation was made at the last session of Congress to meet the expense of this work subsequent to June 30, 1880, but payments of this class have been continued as far as possible. As this work will continue until the claims now on hand are disposed of, as well as the current settlements by the accounting officers of the Treasury, I recommend that Congress be called upon to render available the unexpended balances, above referred to, to meet the expenses attending payment of these claims.

I am, sir, very respectfully, your obedient servant,

N. W. BROWN,  
*Paymaster-General, U. S. Army.*

The Hon. the SECRETARY OF WAR.

## REPORT OF THE CHIEF OF ORDNANCE.

WAR DEPARTMENT, ORDNANCE OFFICE,  
*Washington, October 1, 1880.*

The Hon. SECRETARY OF WAR:

SIR: I have the honor to submit the following report of the principal operations of the Ordnance Department during the fiscal year ended June 30, 1880, with such remarks and recommendations as the interests of this branch of the military service seem to require.

The fiscal resources and expenditures of the department during the year were as follows, viz:

Amount in the Treasury to the credit of appropriations on June 30, 1879.	\$224,848 45
Amount in the Treasury not reported to the credit of appropriations on June 30, 1879.....!	3,086 94

Amount in government depositories to the credit of disbursing officers and others on June 30, 1879.....	\$79,040 27
Amount of appropriations for the service of the fiscal year ended June 30, 1880.....	1,464,500 00
Amount refunded to ordnance appropriations in settling accounts during the fiscal year ended June 30, 1880.....	18,461 37
Gross amount received during the fiscal year ended June 30, 1880, from sales to officers; from rents; from collections from troops on account of losses of, or damage to, ordnance stores; from Chicago, Rock Island, and Pacific Railroad Company; from exchange of powder; from sales of condemned stores; and from all other sources not before mentioned.	264,008 68
Total.....	<u>2,053,945 71</u>
Amount of expenditures during the fiscal year ended June 30, 1880, including expenses attending sales of condemned stores, exchange of powder, &c.....	\$1,597,742 33
Amount deposited in Treasury during the fiscal year ended June 30, 1880, as proceeds of sales of government property.....	157,915 39
Amount lapsed into the Treasury from the appropriation "Ordnance material," under act of March 3, 1875, during the fiscal year ended June 30, 1880.....	75
Amount transferred from ordnance appropriations in settling accounts during the fiscal year ended June 30, 1880.....	52 36
Amount turned into the "surplus fund" on June 30, 1880.....	539 21
Amount in government depositories to the credit of disbursing officers and others on June 30, 1880.....	135,996 13
Amount in the Treasury not reported to the credit of appropriations on June 30, 1880.....	7,155 44
Amount in the Treasury to the credit of appropriations on June 30, 1880.	154,544 10
Total.....	<u>2,053,945 71</u>

The duties and responsibilities of the Ordnance Department are fixed by the laws. The department provides arms and ordnance, and ordnance stores for our sea-coast defense, and the Regular Army in all its branches; supplies the whole body of the militia, the Marine Corps of the Navy, all other departments of the government when necessary to protect public money and property, and the thirty colleges authorized to receive arms. It does more, its province is to determine on the best, most efficient, and most effective war material for the service, and its responsibilities in this regard are ever present and never ending. The product that has taken years of study and trial to perfect not only in design, but in manufacture, may appear to the user so simple that the least imperfection will insure an adverse judgment. No one who has not had practical experience can understand or realize the many and complicated conditions that accompany the use of explosives, whether in the production of a heavy gun to pierce the thickest armor, or of the small metallic cartridge that has well nigh revolutionized modern methods of warfare. It is easier to criticise the completed product than it is to overcome the many difficulties and obstacles to the perfection of that product. I am proud to say that the Ordnance Department has enjoyed a large measure of success in the performance of its very varied and most important duties.

#### STATIONS AND DUTIES.

The officers of the department are stationed as follows: Two at the Ordnance Office; twenty-six at the Arsenal; five at the National Armory; two at the powder depots; three on the Ordnance Board; two at the foundries; three at the Agency and Proving ground; seven at the headquarters of Departments and Ordnance depots; four at the Military Academy; two on special service in the Interior Department; one in the Treasury Department, and two on sick leave.

During the fiscal year three officers of the line have been transferred to the department, after examination, as required by law.

*Rock Island Arsenal.*—The construction of workshops at the Rock Island Arsenal has been satisfactorily prosecuted under the skillful and economical management of Maj. D. W. Flagler, commanding, and liberal appropriations for that arsenal are recommended.

*Benicia Arsenal.*—I respectfully call attention to the necessity for a new machine shop at the Benicia Arsenal. The only manufacturing establishment on the Pacific Coast belonging to this department should be provided with every convenience and appliance necessary to place it on a working basis. That coast ought not to depend on the manufacturing facilities at arsenals three thousand miles distant, but should be in a manner self-sustaining.

*Powder Depot.*—During the past year a site for a powder depot was selected in Morris County, New Jersey, far removed from closely-settled neighborhoods, but convenient to railroad and canal transportation. The site has been purchased and steps are being taken by Major Parker, commanding, to commence the erection of magazines, and continue the work as rapidly as means are provided by Congress. This depot, when storage room in sufficient quantity has been provided, will relieve the department from much anxiety and responsibility in regard to the storage and preservation of gunpowder. It will enable us to remove such a dangerous explosive from the vicinity of our cities, and, in preventing its deterioration, by storing in well-constructed magazines, repay the cost of its establishment before many years.

*San Antonio Arsenal.*—The report of a recent inspection of the San Antonio Arsenal, Texas, by one of our ordnance officers, fully justifies the estimates submitted for that arsenal. The additional land so often recommended should be purchased, new store-houses and quarters should be at once erected, and the old dilapidated buildings removed. In the long series of years during which that arsenal has so efficiently supplied the wants of the Rio Grande frontier, only ordinary and minor repairs have been made to the buildings, and the time has come when more substantial repairs and new constructions are an absolute necessity. We need shops and more storage room, and the appropriation of money estimated for is earnestly recommended.

*Watervliet Arsenal.*—At the Watervliet Arsenal all work has been conducted satisfactorily to the department. The high estimate placed by the Army and militia on the products made and issued at that arsenal are due to the great experience and able supervision of Col. P. V. Hagner, commanding.

*Ordnance Depots.*—The ordnance depots established at Fort Abraham Lincoln, Cheyenne, and Fort Leavenworth, and the San Antonio and Fort Union Arsenals, on the frontier, have been of the greatest convenience in speedily and thoroughly supplying the troops in the respective departments.

*Frankford Arsenal.*—Frankford Arsenal still continues to be the metallic cartridge factory, and its ammunition is without a superior, judging from Army reports. It has for some time been my intention to recommend the adoption of a reloading cartridge as an economy, and the trials and experiments conducted with that in view will soon enable me to reach a definite conclusion. The present long-range excitement points to heavy charges and severe recoils, but the experience of other armies and a little reflection convince me that for Army purposes the best average results can be obtained by keeping the charge within moderate limits.

*Sandy Hook Proving Ground.*—Estimates for buildings and improvements at the Sandy Hook Proving Ground have been submitted. The interesting, important, and successful labors that have been and are being conducted there fairly deserve the fostering care of Congress, and I recommend liberal appropriations for the proving ground.

#### UNITED STATES TESTING-MACHINE.

This extraordinary machine is now in successful operation at the Watertown Arsenal, under the command of Col. T. T. S. Laidley, Ordnance Department. The appropriation made last session for its care and operation will enable us to fully test its capabilities and make a substantial beginning toward the testing of metals.

This machine is considered the most perfect testing-machine in the world; equally able to test a single hair and the largest column; accurately testing specimens by either tension or compression with any load desired from 1 pound to 800,000 pounds, the specimens being of any length from one inch to thirty feet. Its determinations are of great value to the departments of the government and to the scientific and industrial interests of the whole country.

The memorial of the inventor of this machine, Mr. A. H. Emery, presented to Congress at the last session, asking for additional compensation and reimbursement, with a favorable report from the Committee on Claims of the House of Representatives, are herewith submitted. I respectfully recommend favorable action thereon.

#### MILITIA.

“Congress shall have power”—

To provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions.

To provide for organizing, arming, and disciplining the militia, and for governing such part of them as may be employed in the service of the United States, reserving to the States, respectively, the appointment of the officers, and the authority of training the militia according to the discipline prescribed by Congress.

To make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the Government of the United States, or in any department or officer thereof.

No State shall, without the consent of Congress, \* \* \* keep troops, or ships of war, in time of peace, \* \* \* or engage in war, unless actually invaded, or in such imminent danger as will not admit of delay.

This is the language of the Constitution of the United States, and I invite attention to the completeness of the authority granted to Congress by these provisions.

In my last annual report this subject was discussed to a considerable extent, and some recommendations were made in the interest of a more efficient organization, a more complete armament and equipment, and a more thorough disciplining of the militia.

During the last session of Congress the Committee on the Militia of the House of Representatives, after mature consideration, reported a bill (H. R. 5638), accompanied by a report (No. 763), which I submit herewith.

That report gives an interesting history of the militia laws, from the first action of the Continental Congress in its series of resolutions of July 18, 1775, and discusses in detail the proposed law which it now recommends. In its closing paragraphs the committee's report says:

While the proposed bill scarcely involves the

#### POWERS OF CONGRESS AND RIGHTS OF THE STATES,

your committee deem it proper to present its bearings on those points in order that no question may arise in regard to them.



There is no feature in our form of government in which the powers of the General Government and the rights of the States are so intimately interwoven as in the jurisdiction over the militia. One of the stated primary causes for forming the Union was to "provide for the common defense." In the opinion of the framers of the Constitution, a well-regulated militia was the essential means of providing for the common defense, and they accordingly framed the clause to provide that Congress shall have power—

"To provide for organizing, arming, and disciplining the militia, and for governing such part of them as may be employed in the service of the United States, reserving to the States respectively the appointment of the officers, and the authority of training the militia according to the discipline prescribed by Congress."

The purposes and provisions of this clause are clearly and distinctly stated and scarcely admit of misinterpretation. The States are expressly limited to the appointment of the officers and to training the militia, and in training it according to the discipline prescribed by Congress. If the power conveyed to Congress by the words "organizing, arming, and disciplining" could be doubted, the debates of the Federal Convention are sufficiently clear to remove them. The committee that reported the clause, on being asked the scope of the powers that they intended to convey, replied that they meant by "organizing," proportioning the officers to the men; by "arming," not only to provide for uniformity of arms, but the authority to regulate the modes of furnishing them, either by the militia themselves, the State governments, or the National Treasury; and by "disciplining," to prescribe the manual exercise, evolutions, &c., and that laws for disciplining must involve penalties and everything necessary for enforcing penalties.

The debates of the Federal Convention on adopting the clause, though short, are pertinent.

Mr. Mason, who introduced the subject, thought that all power over the militia should be vested in the General Government, which he subsequently modified by suggesting that this absolute power should be limited to a portion of the militia at a time, so that by serving in rotation the whole body would finally be disciplined.

Mr. Madison thought that the regulation of the militia naturally appertained to the authority charged with the public defense, that it did not seem in its nature divisible between two distinct authorities, and that the discipline of the militia is evidently a national concern, and ought to be provided for in the National Constitution.

The clause as reported by the committee had but little opposition, it being conceded, as stated by Mr. Randolph, that reserving to the States the appointment of the officers was all the security they needed. Mr. Dayton and Mr. Ellsworth expressed themselves in favor of placing greater limitation on the power of Congress, but a motion made for that purpose received only one vote, that of Mr. Ellsworth, who moved it, and the clause, as it now stands, was therefore adopted with a marked unanimity in sentiment and vote.

We have only adverted to the question of the constitutional power of Congress as a matter of historical interest in connection with the general subject, for whatever question there may be as to the constitutionality of the existing law, or of some of the plans heretofore suggested for reorganizing the militia, none can possibly arise on the proposed bill, for it is a happy solution of all the constitutional questions involved. There is not a compulsory feature in the bill. It simply says to the States that if they will by their own laws provide for and enforce such requirements as Congress deems necessary to secure an efficient militia, Congress will exercise its unquestioned constitutional power, and provide for arming such militia out of the National Treasury.

Section 2 of the bill provides: "That the militia shall be divided into two classes; the active, to be known as the National Guard; and the inactive, to be known as the reserve militia."

Section 7 limits the number of the "active" militia to not more than seven hundred for each Representative or Delegate, that is an aggregate for the whole country of about 200,000 men, to be known as the National Guard. The "inactive" militia will be composed of the remainder of the "abled-bodied male citizens" between the ages of eighteen and forty-five, which amount to over 6,000,000 of men. It is thus seen that only one out of every thirty men will be enrolled in the National Guard, which is surely a very small fraction of the population for so large a country geographically as the United States.

The end and aim of this bill is to organize, arm and discipline only a small portion of the able-bodied men, but to do so so perfectly that the country may at all times be in possession of 200,000 soldiers—citizen



soldiers, as distinguished from the Regular Army—but soldiers in fact, in organization, in discipline, in the use of arms, and ready at a moment's call to take the field.

To do this thoroughly and effectually requires arms, clothing, equipage, time expended in camp, enthusiasm and encouragement from the top through all the grades to the private soldier at the bottom, but first of all a liberal appropriation by Congress to start and give a healthy impetus to the movement.

The object of this bill is simply stated by the committee in its report: *“That if they (the States) will by their laws provide for and enforce such requirements as Congress deems necessary to secure an efficient militia, Congress will exercise its unquestioned constitutional power, and provide for arming such militia out of the National Treasury.”* And with this in view its leading features are thus stated:

First. To substitute a volunteer militia, limited in number in time of peace, for the existing compulsory system that applies to the whole body of the people, and which has become so inapplicable as to be utterly disregarded.

Second. To make such provisions as will aid and encourage the formation of volunteer organizations, remove the disparity in their numbers and discipline that exists between different States, and promote their efficiency to a common standard that will make them available for all the purposes for which a militia is required.

Third. To abolish the present system of a permanent appropriation to provide arms and equipments for the militia, and substitute provisions prescribing with what arms and equipments the militia shall be furnished, and on what conditions—leaving it in the discretion of Congress to regulate the annual appropriations for that purpose.

Objection has been made to section 19 of this bill, empowering the President to order any part of the militia into the United States service, because it authorizes him in terms “To issue his orders for that purpose to such officers of the active militia as he may think proper.” As the committee's report very correctly states, this provision does “not differ materially from existing law.” The act of February 28, 1795, “To provide for calling forth the militia,” &c., authorizes the President “To issue his orders for that purpose to such officer or officers of the militia as he shall think proper,” and section 1642, Revised Statutes, uses the same words; so that it would seem that this objection is raised in ignorance of the law passed eighty-five years ago, and which has remained unrepealed to this day.

While not claiming absolute perfection for its provisions, I am thoroughly convinced that such legislation will be timely and wise, show on the part of Congress an interest in this most important arm of the national power, convince those who have labored so faithfully to keep alive a healthy military spirit in the militia that their efforts have not been in vain, and will place the fighting portion of the country in a condition for prompt and efficient action.

This bill reaches in its effect every portion of the country, spreads the facilities for making good soldiers throughout the length and breadth of the land, neglects no portion, however remote or inaccessible, and supplies the means for training a nucleus of soldiers in every locality about which in time of need regiments and armies may rally. It will place the country in condition of active preparation for emergencies, and show to the world that the citizens of this country are its soldiers.

The general conclusions of the committee in its report are as follows:

From this review of the subject your committee are satisfied that time has solved those difficulties of the militia system for which the wisdom of our predecessors could find no acceptable remedy, and that the great increase in the population of the country now makes it not only practicable but desirable to substitute the volunteer system for enforced militia duty in time of peace. The subject is one on which there

never have been any political differences, and on which none should exist. Washington, as the exponent of the Federalists, was unceasing in his efforts to procure legislation, and Jefferson, as the leader of the Anti-Federalists, was even more importunate in urging it. In view of these facts, and of the fact that we now have practically no militia system, and that the strength and perpetuity of our republican form of government largely depend on the existence of a well-regulated militia, we indulge the hope that the subject will receive the earnest consideration which it deserves, and that some decisive action will be taken on it.

As bearing directly upon this subject, I submit copy of Senate Ex. Doc. 22, 45th Congress, 2d session, being my reply to the several points of inquiry embraced in Senate resolution of 13th of December, 1877, in regard to the militia.

For many years, in my Annual Reports and in other ways, I have urged upon Congress the wants of the whole body of the militia, and the necessity for legislation thereon. The permanent appropriation of \$200,000, ample no doubt in 1808 for a population of eight millions, has proved entirely inadequate for a population of nearly fifty millions, and a country washed by two oceans, with over three thousand miles between their shores. The laws on our statute books for organizing the militia are obsolete in part, and in part inoperative. They were probably found all-sufficient for the militia in the early portions of our history with a small population, the country sparsely settled, and no grand centers of busy, bustling, thriving people; but in our present condition, with an immense territory bordered by powerful neighbors, with immense wealth and the greatest prosperity, with a present and a future the envy and admiration of the nations, these laws are insufficient. They should be replaced by others that will more surely and practically carry out the views of the framers of the Constitution, and satisfy the present wants and future demands of our people.

The bill under consideration may not be complete in its provisions nor perfect in its details, nor sufficiently comprehensive in its scope, but it fixes our *active* volunteer militia within practicable limits, makes it an intelligent living force that can be utilized and controlled, and brings the protection of a legalized armed body of our citizens within easy reach of every portion of the country.

I have therefore the honor to recommend this subject to your favorable consideration, in the hope that the provisions of the bill will receive your approval, and that Congress will, at its next session, pass the bill, and make liberal appropriations to supply all the wants of the *active* militia.

#### TARGET PRACTICE—CREEDMOOR.

The interest manifested in rifle firing throughout the Army has culminated in the victory gained at Creedmoor by the Army team from the Division of the Missouri. In the international military match, September 16, 1880, the contest for the Hilton shield was narrowed down to the three Army teams, and to one each from New Jersey, Connecticut, and Pennsylvania. The Missouri team took the prize, the Atlantic and Pacific teams coming next in order. The scores were as follows: Missouri, 1,023; Atlantic, 1,014; Pacific, 1,004; New Jersey, 972; Connecticut, 959; Pennsylvania, 954.

The *Army and Navy Journal*, in its issue of September 25, 1880, page 149, speaking of last year's contest, says:

It was now conceded that the rifles as well as the men had something to do in the victory of New York's marksmen, and during the winter of 1879-'80 the Ordnance Department, U. S. A., sought to perfect a rifle that, in the hands of a good team, should win. This, as the records of the match prove, they have most successfully ac-

completed, and the rifle used by the Army teams in 1880, with its six-groove barrel, special sights, increased ammunition, and perfect stock, is one of the handsomest weapons, military, that we have ever seen.

That the Army teams, and officers and soldiers individually, have done the service great honor at Creedmoor is conceded by all, but the Army should not, and will not, forget to give with lavish hand the fullest credit to those of the volunteers who established the firing ground at Creedmoor, and succeeded so well in satisfying the country of the crying necessity for the best marksmen among our people. These contests will tend to draw closer the fraternal relations that should always exist between the volunteers and regulars, a bond of brotherhood that should be as intimate in peace as it must ever be in war, and this Department will in future, as it has in the past, assist the volunteer militia by every means in its power.

#### MILITARY EDUCATION AT COLLEGES.

Section 1225, Revised Statutes, as amended by act of July 5, 1876, authorizes the issue of arms, artillery, &c., to colleges where an officer of the Regular Army has been detailed, the number not to exceed thirty, &c. This law calls for material modifications. There should be more permanency in the detail and in the institution that is to receive these benefits.

As each State is expected to organize its portion of the National Guard; it should have also the educational facilities for the instruction of its young men in military art and science. To this end the law should increase the number of colleges entitled to receive arms, &c., allowing one college to each State to be selected by the legislature thereof, and an additional one or more for the larger States to be determined by the Secretary of War, the whole number not to exceed fifty. Service at a college should not be considered optional with the officer detailed, but be fixed as a military duty to which all officers are liable, only to terminate at the discretion of the War Department. Governmental supervision and inspection of these colleges as regards military training, discipline, and study, should be a condition attached to the acceptance of the liberality of the general government. The providing of officers and arms makes these colleges, in a sense, a very important portion of the military establishment, because of the direct influence they must exercise over the efficiency of the militia, supplying, as they will from year to year, a number of competent instructors.

#### ARMAMENT OF FORTIFICATIONS.

The appropriation for armament at the last session of four hundred thousand dollars is, I trust, an indication of a liberal policy on the part of Congress toward this indispensable arm of the national defense.

In making this appropriation Congress included in the item "the manufacture of four improved breech-loading twelve-inch rifled guns," and the debates clearly show that it was the intention that these four should be at once made. It as clearly appeared that the selection of the system was left to the Ordnance Department, under the Secretary of War, and the expectation was as plainly stated that the system used would be the one that had so successfully stood the test at the Sandy Hook proving ground.

The want of certain portions of plant to enable the foundries to undertake the manufacture of guns larger than any heretofore made in

this country, and the necessity that the department should supply a portion of it in aid of the enterprise, the long and tedious examinations and calculations to reach the exact cost that would pay the foundries a fair profit for their labor and risk, delayed the placing of contracts for some time. All this has, however, been satisfactorily settled, and the work will be pushed to completion as rapidly as possible.

No stronger argument in favor of large annual appropriations can be stated than the fact that the first of these four guns will be completed and delivered to us in sixteen months, the second in eighteen months, the third in twenty months, and the fourth in twenty-two months, or about two years after the passage of the bill making the appropriation.

The money that may be expected from year to year is so uncertain as to quantity that the foundries are not justified in running the risk of making such ample preparation of plant as the increased size of modern ordnance requires to insure a large yearly product. Two years to complete four guns is the very best that can be done by the foundries with all the assistance this department can render. May I not ask that it be recommended to Congress to increase the appropriation of last year, make it a permanent one, if possible, that the existing condition of things may be so far improved by Congressional encouragement as to enable our foundries to perfect their establishment so as to do the largest amount of work in the shortest possible time. Liberal appropriations for the armament of our forts are of the first importance, and cannot be too strongly urged.

In my last annual report reference was made to the trial of an 11-inch *muzzle-loading rifle* converted from a 15-inch smooth-bore, which had been fired only 33 rounds. The test for endurance of this gun was afterwards continued to a very successful conclusion; 401 rounds were fired, 27 being with 90 lbs. of powder and 495 lbs. shot; 174 with 90 lbs. of powder and 543 lbs. shot, and three with 95 lbs. powder and 540 lbs. shot (see report herewith). This trial affords additional evidence of the strength of this system of gun construction, which had been so successfully proven in the trial of the 8-inch rifles.

The 8-inch *breech-loading rifle*, which, at the date of my last annual report, had only been fired 202 rounds, has been further tested for endurance up to 501 rounds, 489 of which were with battering charges of 35 lbs. powder and 180 lbs. shot. The report of the Ordnance Board concludes as follows:

The endurance of this system of gun construction, and the endurance as well as the successful manipulation of the breech mechanism, in the opinion of the Board, have been satisfactorily established, and, in its judgment, the department is warranted in their adoption for future new constructions, as well as in future conversions of smooth-bore into rifled guns.

I fully concur in the opinion of the Ordnance Board.

*The chambered 8-inch rifle.*—The decided advantages resulting from the use of chambers for heavy charges having been demonstrated by testing a 3-inch rifle, it was decided to chamber one of the 8-inch rifles. The preliminary firings were so satisfactory that I directed the firing of 100 rounds with maximum charges of 55 lbs. powder and 180 lbs. of shot. The detailed report of the Ordnance Board is herewith submitted. Its conclusions are as follows:

This experiment shows that with pressures entirely within the limits of safety the increased velocity due to chambering has increased the power of the 8-inch rifle about one-third, and that the increase of power is accompanied by an increased accuracy of fire. The wear of bore incident to the higher charge with the 111 rounds fired seems no greater than that in the unchambered gun with the 35-pound charge.



The system of chambering in all future conversions or new constructions is recommended.

The battering charge of the ordinary 8-inch rifle is only 35 lbs. powder and 180 lbs. shot. By chambering, we are enabled to increase the powder charge from 35 to 55 lbs. Its penetration at 1,000 yards will be 9.93 inches, the ordinary rifle giving only 7.73 inches. The 9-inch English rifle gives 8.76 inches, so that by the use of the chamber the energy of the 8-inch has been increased beyond that of the next higher caliber, English—a most satisfactory result.

The report of the constructor of ordnance includes—

The report on a *breech-loading chambered field rifle* converted from a 3-inch wrought-iron gun gives the details of construction by which, at a reasonable cost, we are enabled to utilize the large number of muzzle-loading wrought-iron guns now on hand. The trial has been so conclusive that, with your approval, six of these guns are now being prepared for issue to the artillery for test in actual service.

The report on a *steel and iron field carriage* for the breech-loading rifle mentioned above gives the details of its construction. It is the intention to supply these carriages that they may be tested with the guns in the batteries of artillery. The introduction of metal carriages for the field service has not been a necessity until now, because of the large supply of those made of wood, but the advisability of substituting metal for wood was recognized in the experimental iron carriages made by Colonels Rodman and Benton fourteen years ago.

Among the papers submitted are :

The report of the construction of the 8-inch *chambered* rifle referred to heretofore ;

Captain Smith's interesting progress report on *experimental cannon powders* ; and Lieutenant Whipple's valuable report on *tests of bar iron* used in the fabrication of wrought-iron tubes for converted guns.

In closing this brief summary of the labors of the Ordnance Department on the great gun problem we can fairly lay claim to have achieved great success. As the use of gunpowder in full battering charges, continuously and thoroughly applied, is the only means that can be entirely relied upon as affording a sure and crucial test for endurance, it must be admitted that our system of conversion has, from actual experiments on our proving-ground, proved a success for all calibers and kinds tested, and up to eleven inches in bore. We have therefore the strongest reasons to hope for equal success in the production of new guns of yet higher natures, made on the same general principles of construction—applicable alike to muzzle-loading and breech-loading systems—and this, too, while attaining all the advantages of the latest improvements in the more recent products of European nations.

It is but justice to give full credit, for what has thus far been so successfully accomplished, to Lieut. Col. S. Crispin, constructor of ordnance, and to the other members of the Ordnance Board, Lieut. Col. T. G. Baylor and Maj. C. Comly, and the late Lieutenant-Colonel Treadwell.

#### EXPERIMENTAL GUNS.

Under the act of Congress approved June 6, 1872, appropriating funds for the procurement and tests of experimental rifled ordnance of heavy calibers (to be selected by a board of officers of the United States Army to be appointed by the honorable Secretary of War) the department, under the authority of law, has procured, amongst others, several guns which are now on hand at the proving-ground at Sandy Hook awaiting trial.



*Appendix 8'.—Tests of bar iron used in the fabrication of wrought iron tubes for converted rifles.*

#### REPORTS OF THE ORDNANCE BOARD.

*Lieut. Cols. S. Crispin and T. G. Baylor and Maj. C. Comly, Ordnance Department.*

*Appendix 9.—Field, siege, and sea-coast artillery.*

*Appendix 9<sup>a</sup>.—Rifled and spherical projectiles.*

*Appendix 9<sup>b</sup>.—Report on 11-inch muzzle-loading rifle, No. 1.*

*Appendix 9<sup>c</sup>.—Report on 8-inch breech-loading rifle, No. 1.*

*Appendix 9<sup>d</sup>.—Report on 8-inch muzzle-loading chambered rifle, No. 28.*

*Appendix 9<sup>e</sup>.—Report on 3.18-inch breech-loading chambered rifle, No. 774.*

*Appendix 9<sup>f</sup>.—Report on powders for 4.5-inch siege rifles.*

#### MISCELLANEOUS.

*Appendix 10.—Annual report of the principal operations at the Rock Island Arsenal, 1880, Maj. D. W. Flagler, Ordnance Department, commanding.*

*Appendix 11.—Description of a machine for printing paper targets, and a barrack gun rack, devised by Maj. D. W. Flagler, Ordnance Department.*

*Appendix 12.—Report on a new cartridge annealing furnace, by Lieut. Col. J. M. Whittemore, Ordnance Department.*

*Appendix 13.—Description of an arm-rack for company quarters, by Capt. F. H. Phipps, Ordnance Department.*

*Appendix 14.—Report on foreign life-saving apparatus, by Lieut. D. A. Lyle, Ordnance Department.*

*Appendix 15.—Description of a new method of fastening faking boxes for the life-saving service, by Lieut. D. A. Lyle, Ordnance Department.*

*Appendix 16.—Descriptive report on two galvanized sheet-iron faking boxes designed for the life-saving service, by Lieut. D. A. Lyle, Ordnance Department.*

*Appendix 17.—On the U. S. testing machine.*

*Appendix 18.—On the militia.*

*Appendix 19.—Trial of the Gardner machine gun.*

*Appendix 20.—Gallery target practice.*

*Appendix 21.—Benton's electro-ballistic machine for determining the velocity of projectiles.*

*Appendix 22.—Carriage for the Lowell battery gun, by Col. P. V. Hagner, Ordnance Department.*

*Appendix 23.—Report on the Welden range finder, by Lieut. A. H. Russell, Ordnance Department.*

*Appendix 24.—Instructions for the care and use of cartridge reloading tools, by Lieut. Col. J. M. Whittemore, Ordnance Department.*

*Appendix 25.—Extreme ranges of military small-arms, by Col. J. G. Benton and Capt. John E. Greer, Ordnance Department.*

*Appendix 26.—The most powerful rifled guns, howitzers, and mortars existing in 1880, by Capt. Charles S. Smith, Ordnance Department.*

*Appendix 27.—Showing stations and duties of the officers of the Ordnance Department on the 1st of October, 1880.*

I have the honor to be, very respectfully, your obedient servant,  
S. V. BENÉT.

*Brigadier-General, Chief of Ordnance.*

REPORT OF THE CHIEF OF ENGINEERS.

OFFICE OF THE CHIEF OF ENGINEERS,  
UNITED STATES ARMY.

Washington, D. C., October 16, 1880.

SIR: I have the honor to present for your information the following report upon the duties and operations of the Engineer Department for the fiscal year ending June 30, 1880:

OFFICERS OF THE CORPS OF ENGINEERS.

The number of officers holding commissions in the Corps of Engineers, United States Army, at the end of the fiscal year, was 107 on the active list and 6 on the retired list; the latter, however, under the law of January 21, 1870, not being available for duty. In the duties devolving upon the Corps by law and by its organizations, the employment of a number of scientists and assistant engineers has been necessary.

Since the last annual report the Corps has lost, by death and retirement, three of its officers: Capt. A. N. Lee, who died at Louisville, Ky., October 31, 1879; Capt. M. R. Brown, who died at Lawrence, Mass., April 9, 1880; and Col. J. H. Simpson, who was retired March 31, 1880, in conformity with provision of section 1243, Revised Statutes, after more than forty years of continuous active service.

There have been added to the Corps, by promotion of graduates of the Military Academy, two second lieutenants, whose commissions date from June 12, 1880, but who did not become available for duty till after the close of the year, and are, therefore, not included in the strength of the Corps.

On the 30th June, 1880, the officers were distributed as follows:

On duty Office Chief of Engineers, including the Chief.....	4
On duty Public Buildings and Grounds, District of Columbia .....	1
On duty fortifications .....	1
On duty fortifications and light-house duty .....	1
On duty fortifications and river and harbor works .....	13
On duty fortifications, river and harbor works, and light-house duty .....	1
On duty Board of Engineers .....	2
On duty Board of Engineers and river and harbor works .....	1
On duty Board of Engineers, fortifications, and river and harbor works.....	2
On duty Board of Engineers, battalion of engineers, and fortifications .....	1
On duty Board of Engineers and light-house duty.....	1
On duty river and harbor works .....	29
On duty river and harbor works and light-house duty .....	3
On duty survey of northern and northwestern lakes and Mississippi River.....	1
On duty survey of northern and northwestern lakes .....	1
On duty jetties at mouth of Mississippi River, fortifications, and light-house duty.	1
On duty explorations of country west of one hundredth meridian.....	1
On duty with battalion of engineers.....	13
On special duty in Europe.....	1
On staff of general commanding department, and on river and harbor works.....	1
Detached, on duty with the General of the Army, generals commanding divisions and departments, Light-House Establishment, Military Academy, the Board of Commissioners of the District of Columbia, and "The Mississippi River Commission" .....	28

107

The officers detached were on duty as follows:

Lieut. Col. William F. Raynolds, engineer fourth light-house district.....	1
Lieut. Col. J. C. Duane, engineer second and third light-house districts.....	1
Maj. O. M. Poe, on staff of the General of the Army .....	1
Maj. O. E. Babcock, engineer fifth light-house district.....	1

Maj. P. C. Hains, engineer sixth light-house district.....	1
Maj. F. U. Farquhar, engineer-secretary to the Light-House Board.....	1
Maj. W. J. Twining, Engineer Commissioner District of Columbia .....	1
Capt. D. P. Heap, engineer tenth light-house district.....	1
Capt. W. A. Jones, on staff of major-general commanding Division of the Pacific.	1
Capt. W. R. Livermore, on staff of commanding general Department of Texas....	1
Capt. W. S. Stanton, on staff of commanding general Department of the Platte..	1
Capt. J. F. Gregory, on staff of Lieutenant-General, Division of the Missouri ....	1
Capt. E. H. Ruffner, on staff of commanding general Department of Missouri....	1
Lieuts. R. L. Hoxie and F. V. Greene, assistants to the Engineer Commissioner District of Columbia .....	2
Lieut. C. F. Palfrey, on staff of commanding general Department of Arizona ....	1
Lieut. T. W. Symons, on staff of commanding general Department of Columbia..	1
Lieut. S. S. Leach, secretary and disbursing officer of the Mississippi River Com- mission .....	1
Capt. C. W. Raymond and Lieut. H. S. Taber, on duty with Company E, battalion of engineers, and at the Military Academy .....	2
Capt. C. B. Sears, and Lieuts. J. G. D. Knight, Eric Bergland, S. E. Tillman, W. T. Rossell, T. N. Bailey, D. C. Kingman, and Willard Young, on duty at the Military Academy .....	8
<b>Total.....</b>	<b>28</b>

## SEA-COAST AND LAKE-FRONTIER DEFENSES.

During the past fiscal year work upon our sea-coast defenses has been limited, in accordance with the terms of the act of March 3, 1879, to their protection, preservation, and repair.

These works are subject more than any other national structures, with the exception, perhaps, of light-houses, to the destructive and deteriorating effects of the sea, and the amount heretofore appropriated for the above-mentioned objects has proven insufficient, many necessary works of repair and protection remaining unexecuted at the close of the fiscal year, for want of funds.

No progress whatever has been made for several years past in the construction of new, or in the modification of our old works (built before the inventions of modern ordnance and armored ships), for want of appropriations therefor.

The importance of early and reasonable expenditures for our sea-coast defenses cannot be more strongly urged than by reiterating what has been stated in former reports by this department; and, therefore, in the following remarks on the subject, the arguments and the statements contained in these reports will, when necessary, be freely used.

The United States, separated from the rest of the world by wide oceans, pursuing towards all nations a policy strikingly characterized by its pacific tendency, its impartiality and justice; contracting no political alliances; confining her intercourse with the rest of the world rigidly to the letter of such temporary arrangements as are dictated by reciprocal commercial interests, might, at first view, be regarded as too remote physically, and as politically too insulated, to be endangered by the convulsions which, from time to time, disturb the nations of the earth.

Neither our geographical position, however, nor our forbearance, nor the equity of our policy, can always avail us under the relation in which it is our destiny to stand to the rest of the world.

Experience has shown that even the intercourse of traffic, much as it conduces to our prosperity, can be indulged only at the risk of obliging the nation occasionally to assume a belligerent attitude, and of surrendering to the spirit of contention—which seems to govern nations as it does the natural man—a portion of its fruits. The certainty of the re-

turn of periods of embarrassment and strife with foreign nations similar in their origin to those which have visited this nation, affords a sufficient reason of itself for securing ourselves in the best manner against the more serious evils of these unavoidable collisions.

No one acquainted with our history can hesitate to ascribe much of the wantonness and duration of the wrongs we have endured to a knowledge on the part of the nations of the scantiness and inefficiency of our military and naval forces. It is certain that in our present condition injuries to our citizens abroad and insults to our flag could not be resented with that vigor and promptitude demanded by the dignity and honor of the nation, and justified by a knowledge that our fine harbors, important navy-yards, rich commercial cities, and depots for military and naval stores were guarded by impregnable fortifications and obstructions.

It concerns the honor of the United States, when involved in controversy with other powers, to be able to appeal to the sword, but that appeal should be accompanied by the consciousness that the weapon appealed to would not be inferior to that held by the adversary. This relation of inferiority may at present exist though the adversary be a comparatively weaker power.

When the great change in ships and their armaments was initiated after the commencement of our late civil war, Great Britain did not hesitate to appropriate \$40,000,000 for the defense of its most important harbors, and we may well profit by her example. There is nothing so costly to a nation as a lack of preparation for war. In fact, to be prepared for war will often prevent it; and though we may not feel the daily imminence of war with great foreign powers, as England did, yet with incomplete or inadequately armed defenses for our great sea-port cities, even the *attitude* of belligerency, which we not unfrequently have to assume, has not the imposing effect it should have, nor is it accompanied with a justly founded self-confidence on our own part. The neglect of suitable preparation cost France many millions of treasure, a portion of her territory, and a great humiliation. The same must inevitably happen to the United States if it does not push forward its coast defenses and provide them with guns like those possessed not only by the great powers, but even by smaller nations.

It is upon our maritime frontier that we are most exposed. Our coast for three thousand miles is washed by the ocean, which separates us from those nations who have made the highest advances in all the arts, and particularly in those which minister to the operations of war, and with whom, from our intercourse and political relations, we are most liable to be drawn into collision. If this great medium of communication, the element at the same time of separation and of union, interposes peculiar obstacles to the progress of hostile demonstrations, it also offers advantages which are not less obvious, and which, to be successfully resisted, require corresponding arrangements and exertions. These advantages depend on the economy and facility of transportation, on the celerity of movement, and on the power of an enemy to threaten the whole shore spread out before him, and to select his point of attack at pleasure. A powerful hostile fleet upon the coast of the United States presents some of the features of a war where a heavy mass is brought to act against detachments which may be cut up in detail, although their combined force would exceed the assailing foe. Our points of exposure are so numerous and distant that it would be impracticable to keep, at each of them, a force competent to resist the attack of an enemy prepared by his naval ascendancy and his other arrangements to make a sudden and vigorous inroad upon our shores. It becomes us, therefore, to inquire how the consequences of this state of things are to be best met and averted.\*

In the event of war with a maritime nation, if we had no well-digested system of fortifications ready for use, the cruisers and war vessels of the enemy could run into our harbors, and, without landing, could either

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\* Secretary of War Cass.

destroy the property along our shores or else lay our cities under contribution. We have a sea-coast line of more than three thousand miles in extent on the Atlantic and Gulf of Mexico, and one thousand miles on the Pacific, not including Alaska, along both of which lie scattered all the great cities, all the depots of commerce, all the establishments of naval construction, outfit and repair, and towns, villages, and establishments of private enterprise without number. From these lines of seacoasts, navigable bays, estuaries, and rivers, the shores of which are similarly occupied, penetrate deep into the heart of the country. The accurate detailed charts of our harbors and channels published by the United States Coast Survey are accessible to all nations and are doubtless in their possession. There are foreign military and naval depots and arsenals in close proximity to our shores, and the arrival of armed vessels will follow in a few days or even hours the declaration of war. Thirty-six hours' steaming could bring them from Halifax; 6 hours could bring them from Havana; and 96 hours from Victoria, Vancouver's Island, could bring them in front of San Francisco, the navy-yard at Mare Island, and the arsenal at Benicia. There might be very little time for preparation to meet the assaults of these fast-running, sea-going, armored ships, ships clad with from 6 to 24 inches of iron armor, carrying rifled guns from 9 inches to 17 inches bore, which are more powerful than any gun we have in our service. With a fleet or even a single vessel of this kind in one of our harbors, it would be of no avail to collect troops in the city or town threatened. Suppose, with our railroad facilities, we could concentrate 100,000 men in 24 hours at the point threatened, of what use would they be against the armored ship? Suppose that in a night the men concentrated could throw up temporary earthworks and mount such guns as might be hastily mounted on improvised platforms, 32-pounders, 42-pounders, 100-pounder rifles (even if it were possible to handle guns of this small size with the rapidity assumed)—what injury could all this do to the armored ship? The projectiles from such batteries would fall harmlessly from the side of the enemy. While lying, if need be, beyond the range even of our guns, with his 800 to 2,000 pounders he would pierce such temporary parapets through and through, dismount the guns, and explode any magazines of a temporary character.

But it may be said that we would mount guns as powerful, and even more powerful than those of the enemy. Doubtless this would be done; first, if we had such guns in our service, and, second, if we had the time.

The only modern guns of which we have any number are 8-inch rifles carrying shot of 180 pounds, fired with 35 pounds of powder, of which there are on hand 110. It is understood that the Ordnance Department has recently obtained appropriations, and has made contracts, for constructing four breech-loading 12-inch rifles on the Krupp plan, which will carry shot of 800 pounds fired with 300 pounds of powder, and that that department will convert the 325 15-inch smooth-bores on hand (which at 1,200 yards are less efficient than the 9-inch rifle) into 11-inch breech-loading rifles, carrying shot of 500 pounds fired with 90 pounds of powder, as soon as Congress may appropriate money therefor.

Such is our condition for arming our coasts. European governments are rapidly replacing their old armaments by rifled guns of immense calibers, among which are 12-inch rifles, which weigh 38 tons and carry shot of 800 pounds, fired with 130 pounds of powder; and 16-inch rifles, which weigh 80 tons and carry shot of 1,700 pounds, fired with 370 pounds of powder; and they are now making 17-inch rifles, which weigh 100 tons and carry shot of 2,000 pounds, fired with 470 pounds



of powder! These are the kinds of guns we must mount in batteries against the armored vessels. But their great weight and size require corresponding dimensions in the batteries in which they are placed, and in the strength and solidity of the platforms upon which they are mounted. The parapets and traverses of earth and sand to protect them must be three and even four times as thick and massive as they were formerly built, to resist the armaments of 20 years ago. Where the parapets of earth were but 10 feet in thickness, now they must be 40 feet. Guns that were formerly dragged with ease by 15 or 20 men, and placed in position over night, are now supplanted by armaments of such huge masses that special mechanical appliances are required to move them even slowly, and cannot be lifted upon their supports without the aid of hydraulic power. No matter how many men may be at our disposal, the time required to place the modern armaments in position is vastly greater than for the guns of 20 years ago, and before such works could be improvised in a harbor, the enemy in his armored ships will have accomplished all he desired, and have sailed or steamed for some other harbor to repeat the injuries of the first. But suppose the harbor in question was on the New England coast, and the season of the year the winter—when the ground is frozen hard—then the erection of efficient earthen batteries would be out of the question.

It will require much time and large expenditures to make the necessary modifications of our casemated works, and to complete our barbette and mortar batteries and furnish them with suitable armaments. It would be but an act of prudence to make the beginning without delay. The disasters of the first three months of a war under the present condition of our defenses might cost the nation tenfold the expenditure that would be needed to thoroughly protect our coast against attack. Our great cities, New York, Philadelphia, Boston, San Francisco, New Orleans, Baltimore, and Washington, should they fall into the hands of an enemy, would suffer ten times more than the cost of all the forts necessary to secure them against such disaster. But such reverses would also be great calamities to the nation, crippling its war power.

It was estimated that in the great fire in the city of Boston, in 1872, the property destroyed within a few hours was worth upward of \$86,000,000, although the fire was confined to a small part of the city, and did not touch the shipping. Is it easy, then, to estimate the loss that would accrue from the fires that a victorious enemy could kindle by his shells? Or is it easy to overrate the tribute such a city would pay for exemption from that calamity? Can we value too highly the pecuniary losses that the destruction of one of the great navy-yards would involve? and the loss beyond all pecuniary value of stores and accommodations indispensable in a state of war, and which a state of war could hardly replace?

In what way may a powerful enemy wage war against us? He may do so—

1. By attacking our commerce and navigation upon the ocean. As, however, no military preparations on the shore can avert this danger, and the means of meeting it must be purely naval, these means do not now fall under consideration; or,

2. By assailing one or more of the important points of the coast with a large military and naval force, with a view to immediate damage, or more or less protracted occupation; or,

3. By suddenly appearing with a large squadron of vessels before our principal commercial cities, laying them under contribution, and burn-

ing or carrying off the shipping, and by making powerful attacks upon our navy-yards in order to destroy those establishments; or,

4. By attacks on smaller towns and establishments of the coast with small squadrons or single vessels, or with privateers, capturing or destroying the shipping therein, and levying contributions, and by like means intercepting the interior commerce within the bays, sounds, and estuaries of the coast; these lesser enterprises being often conducted under the countenance and support of considerable fleets.

The danger may take any of these forms, or all of them. And against any or all of these a naval force of equal or greater strength, if it could with any certainty be found at hand, might be an adequate resort, though it would not be the most economical. But, in the first place, we are yet, and shall be for years, inferior in our naval preparation to nations with which we are likely to be in conflict; and, next, if we were even far superior, it would be impossible to have at each of the points to be guarded a naval force sufficient to secure it, because a hostile squadron of powerful, fast-running armored steamers would fall with equal ease on either of the important points, and could with no more certainty be expected at one than at another; so that, to resist successfully, we must be ready at each and all with a force not less than that of the enemy; if less, an unavailing resistance would but augment the calamitous consequences.

An enemy's squadron, assembled at Halifax or Bermuda, must be equally looked for at every important point, from the Penobscot to New Orleans, inclusive, for it could with equal ease fall upon either. The same would be true, moreover, of such a force assembled in any Atlantic port of Europe.

There has been but one practice among nations as to the defense of ports and harbors, and that has been a resort to fortifications, and obstructions by torpedoes or otherwise. All the experience that history exhibits is on one side only; it is the opposition of forts, or other works comprehended by the term fortifications, to attack by vessels. No nation omits covering the exposed points upon her seaboard with fortifications, nor hesitates in confiding in them.

All the harbors and inlets upon the coast where there are cities or towns whose situation and importance create just apprehension of attack, and particularly where we have public naval establishments, should be defended by works proportioned to any exigency that may probably arise.\*

After a careful and anxious investigation of a subject involving in so high a degree the safety and honor of the country, I fully concur in the opinions expressed by the Board of the superiority of permanent works of defense over all other expedients that have yet been devised, and of their absolute necessity if we would avoid the danger of defeat and disgrace—a necessity rather increased than diminished by the introduction of steam batteries and the use of hollow shot. It would, in my opinion, prove a most fatal error to dispense with them, and to rely upon our navy alone, aided by the number, strength, and valor of the people, to protect the country against the attacks of an enemy possessing great naval means. To defend a line of coast of three thousand miles in extent, and effectually to guard all the avenues to our great commercial cities and important naval depots, the navy of the United States must be very superior to the means of attack of the most powerful naval power in the world, which will occasion an annual expense this country is not now able to bear; and this large naval armament, instead of performing its proper function as the sword of the state in time of war, and sweeping the enemy's commerce from the seas, must be chained to the coast or kept within the harbors.

It has been clearly demonstrated that the expense of employing a sufficient body of troops, either regulars or militia, for a period of even six months, for the purpose of defending the coast against attacks and feints that might be made by an enemy's fleet, would exceed the cost of erecting all the permanent works deemed necessary for the defense of the coast. One hundred thousand men divided into four columns would

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\* Secretary of War Cass.

not be more than sufficient to guard the vulnerable points of our maritime frontier, if not covered by fortifications. An amount of force against an expedition of 20,000 men, which, if composed of regulars, would cost the nation \$30,000,000 per annum, and if militia about \$40,000,000; and, supposing only one-half the force to be required to defend the coast with the aid of forts properly situated and judiciously constructed, the difference of expense for six months would enable the government to erect all the most necessary works. This calculation is independent of the loss to the nation by abstracting so large an amount of labor from the productive industry of the country, and the fearful waste of life likely to result from such a costly, hazardous, and harassing system of defense.

It must be recollected, too, that we are not called upon to try a new system, but to persevere in the execution of one that has been adopted after mature deliberation, and that is still practiced in Europe on a much more extensive scale than is deemed necessary here; so much more so that there exist there single fortresses, each of which comprises more extensive and stronger works than is here proposed for the whole line of our maritime frontier. We must bear in mind, also, that the destruction of some of the important points on that frontier would alone cost more to the nation than the expense of fortifying the whole line would amount to, while the temporary occupation of others would drive us into expenses far surpassing those of the projected works of defense.

The organization of permanent defenses proposed by the Board for our frontiers is not upon military and naval considerations alone, but is calculated to protect the internal navigation of the country. The fortifications proposed, at the same time that they protect our coast from the danger of invasion, and defend the principal commercial avenues and naval establishments, cover the whole line of internal navigation, which, in time of war, will contribute in so essential a manner to the defense of the country by furnishing prompt and economical means of transportation; so that while the main arteries which conduct our produce to the ocean are defended at their outlets the interior navigation, parallel to the coast, is protected, and a free communication kept up between every part of the Union.\*

It is truly an axiom in military science, and one fully illustrated by military history, that the worst mode of waging war, although strictly defensive, is to allow its field of action to be within the borders, and that the best is that which most frequently assumes an offensive attitude. In our case war can only be excluded from our territory by fortifications, and we can only assume the offensive through our Navy. The construction of the former secures the means of creating, equipping, and repairing the latter, and leaves it unencumbered with duties which it imperfectly performs, to the full exercise of its important and appropriate functions.

The opinion *that the Navy is the true defense of the country* has been so acceptable and popular that it demands a careful examination.

For the purpose of first considering this proposition in its simplest terms, we will begin by supposing the nation to possess but a single sea-port, and that this is to be defended by a fleet alone.

By remaining constantly within this port our fleet would be certain of meeting the enemy should he assail it. But if inferior to the enemy, there would be no reason to look for a successful defense; and as there could be no escape for the defeated vessels, the presence of the fleet instead of averting the issue, would only render it the more calamitous.

Should our fleet be equal to the enemy's, the defense might be complete, and probably it would be so. Still, hazard—some of the many mishaps liable to attend contests of this nature—might decide against us, and in that event the consequences would be even more disastrous than on the preceding supposition. In this case the chances of victory to the two parties would be equal, but the consequences very unequal. It might be the enemy's fate to lose his whole fleet, but he could lose nothing more, while we, in a similar attempt, would lose not only the whole fleet, but also the object that the fleet was designed to protect.

If superior to the enemy, the defense of the port would in all respects

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\* Secretary of War Poinsett.

be complete. But instead of making an attack the enemy would in such case employ himself in cutting up our commerce on the ocean, and nothing could be done to protect this commerce without leaving the port in a condition to be successfully assailed.

In either of the above cases the fleet might await the enemy in front of the harbor, instead of lying within. But no advantage is apparent from such an arrangement, and there would be superadded the risk of being injured by tempests, and thereby disqualified for the duty of defense, or of being driven off the coast by gales of wind, thus for a time removing all opposition.

In the same cases, also, especially when equal or superior to the enemy, our fleet depending on having correct and timely notice as to the position and state of preparation of the enemy's forces, might think proper to meet him at the outlet of his own port, or intercept him on the way, instead of awaiting him within or off our own harbor. Here it must be noticed that the enemy, like ourselves, is supposed to possess a single harbor only; but having protected it by other means, that his navy is disposable for offensive operations. If it were attempted thus to shut him up within his own port, he, in any case but that of decided inferiority, would not hesitate to come out and risk a battle; because, if defeated, he could retire under shelter of his defenses to refit, and if successful he could proceed with a small portion of his force—even a single vessel would suffice—to the capture of our port, now defenseless; while with the remainder he would follow up his advantage over our defeated vessels, not failing to pursue them into their harbor should they return thither.

Actual superiority on our part would keep the enemy from volunteering a battle; but it would be indispensable that the superiority be steadily maintained and that the superior fleet be constantly present. If driven off by tempests or absent from any other cause, the blockaded fleet would escape, when it would be necessary for our fleet to fly back to the defense of its own port. Experience abundantly proves, moreover, that it is in vain to attempt to shut a hostile squadron in port for any length of time. It seems, then, that whether we defend by remaining at home or by shutting the enemy's fleet within his own harbor, actual superiority in vessels is indispensable to the security of our port.

With this superiority the defense will be complete, provided our fleet remain within its harbor. But then all the commerce of the country upon the ocean must be left to its fate; and no attempt can be made to react offensively upon the foe, unless we can control the chances of finding the enemy's fleet within his port, and the still more uncertain chance of keeping him there; the escape of a single vessel being sufficient to cause the loss of our harbor.

Let us next see what will be the state of the question on the supposition of numerous important ports on either side, instead of a single one; relying, on our part, still, exclusively on a navy.

In order to examine this question, we will suppose our adversary to be fortified in all his harbors and possessed of available naval means equal to our own. This is certainly a fair supposition, because what is assumed as regards his harbors is true of all maritime nations except the United States, and as regards naval means, it is elevating our own strength considerably above its present measure, and above that it is likely to attain for years.

Being thus relatively situated, the first difference that strikes us is that the enemy, believing all his ports to be safe, without the presence of his vessels, sets at once about making our seas and shores the theater



of operations, while we are left without choice in the matter; for if he think proper to come, and we are not present, he attains his object without resistance.

The next difference is, that while the enemy is certain to fall upon the single point, or the many points he may have selected, there will exist no previous indications of his particular choice, and consequently no reason for preparing our defense on one point rather than another; so that the chances of not being present and ready on his arrival are directly in proportion to the number of our ports; that is to say, the greater the number of ports, the greater the chances that he will meet no opposition whatever.

Another difference is, that the enemy can choose the mode of warfare as well as the plan of operations, leaving as little option to us in the one case as in the other. It will be necessary for us to act in the first instance on the supposition that an assault will be made with his entire fleet; because, should we act otherwise, his coming in that array would involve both fleet and coast in inevitable defeat and ruin. Being in this state of concentration, then, should the enemy have any apprehensions as to the result of a general engagement; should he be unwilling to put anything at hazard; or should he, for any other reason, prefer acting by detachments, he can, on approaching the coast, disperse his force into small squadrons and single ships, and make simultaneous attacks on numerous points. These enterprises would be speedily consummated, because as the single point occupied by our fleet would be avoided, all the detachments would be unopposed and after a few hours devoted to burning cities, or shipping, or public establishments, and taking in spoil, the several expeditions would leave the coast for some convenient rendezvous, whence they might return, either in fleet or in detachments, to visit other portions with the scourge.

Is it insisted that our fleet might, notwithstanding, be so arranged as to meet these enterprises?

As it cannot be denied that the enemy may select his point of attack out of the whole extent of coast, where is the prescience that can indicate the spot? And if it cannot be foretold, how is that ubiquity to be imparted that shall always place our fleet in the path of the advancing foe? Suppose we attempt to cover the coast by cruising in front of it, shall we sweep its whole length—a distance scarcely less than that which the enemy must traverse in passing from his coast to ours? Must the Gulf of Mexico be swept, as well as the Atlantic? or, shall we give up the Gulf to the enemy? Shall we cover the Southern cities, or give them up also?

The uncertainty of the point on which an enemy may direct his attack, the suddenness with which he may reach it, and the powerful masses which he can concentrate at a distance out of our reach and knowledge, or suddenly, and at the very moment of attack, require that every important point be duly prepared to repel his attempt, or retard it, until re-enforcements can arrive and adequate means of resistance be organized. By land we are acquainted with the motions of an enemy, with the movements and direction of its columns; we know the roads by which he must pass; but the ocean is a vast plain without obstacle; there his movements are made out of our sight, and we know nothing of his approach until he is already within the range of the eye. We must, unquestionably, do one of two things, either relinquish a great extent of coast, confining our cruisers to a small portion only, or include so much that the chances of intercepting an enemy would seem to be out of the question.



But what are the enemy's means? They consist of his whole sea-going force which he concentrates for the sake of inflicting the blow.

From the nature of maritime operations, such a fleet could bring its whole strength to bear upon any particular position, and by threatening or assailing various portions of the coast, either anticipate the tardy movements of troops upon land and effect the object before their concentration, or render it necessary to keep in service a force far superior to that of the enemy, but so divided as to be inferior to it on any one point.\*

On the impracticability of covering even a small extent of coast by cruising in front of it, or, in other words, the impossibility of anticipating an enemy's operations; of discovering the object of movements of which we get no glimpse and hear no tidings; and of seeing the impress of his footsteps on the surface of the ocean, it would be well to consult experience.

It may be asked what use will there be in fortifying but comparatively a small number of our harbors when the enemy can land at hundreds of other places on our coasts. It is true that in comparison with the length of our seaboard, the system of defense by permanent fortifications has so far contemplated but a few of the harbors and cities, to wit, the Penobscot and Kennebec Rivers; the harbors of Portland, Portsmouth, N. H., Boston, and New Bedford; Narragansett Bay; the harbors of New London and New York; Delaware River; the harbor of Baltimore, and approaches to THE CAPITAL *via* the Potomac River; Hampton Roads; the harbor of Beaufort, N. C.; the mouth of the Cape Fear River; the harbors of Charleston and Savannah; Cumberland Sound; the harbors of San Augustine, Key West, Dry Tortugas, and Mobile; Ship Island, Mississippi Sound; the mouth of the Mississippi and the other approaches to New Orleans; the harbor of Galveston; the bays of San Diego and San Francisco; and the mouth of the Columbia, less than thirty in all, but most of them have sufficient depth of water to admit the entrance of armored vessels, carrying powerful rifled ordnance, they contain all of our navy-yards, and include the main objects of the enemy.

Although it would appear on a superficial view to be a gigantic and almost impracticable project to fortify such an immense extent of coast as that of the United States, and difficult, if not impossible, to provide a sufficient force to garrison and defend the works necessary for that purpose, yet the statements contained in the reports of the board remove these objections entirely. The coast of the United States throughout its vast extent has but few points which require to be defended against a regular and powerful attack. A considerable portion of it is inaccessible to large vessels, and only exposed to the depredations of parties in boats and small vessels of war; against which inferior works and the combination of the same means and a well organized local militia will afford sufficient protection. The only portions which require to be defended by permanent works of some strength are the avenues to the great commercial cities and naval and military establishments, the destruction of which would prove a serious loss to the country, and would be regarded by an enemy as an equivalent for the expense of a great armament. It is shown, also, that the number of men required, on the largest scale, for the defense of these forts, when compared with the movable force that would be necessary without them, is inconsiderable. The local militia, aided by a few regulars, and directed by engineer and artillery officers, may, without previous training, be safely intrusted with their defense in time of war.†

Of all the circumstances of danger to the coast the chance of an attempt by an enemy to land and march any distance into a populous district is least to be regarded whether there be or be not speedy mode of receiving re-enforcements, and our system of fortifications has little to do with any such danger. In preparing against maritime assaults the security of the points to be covered is considered to be greatly augmented whenever the defense can be so arranged as to oblige an enemy

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\* Secretary of War Cass.

† Secretary of War Poinsett.

to land at some distance; for the reason that opportunity is thereby allowed, in the only possible way, for the spirit and enterprise of the people to come into play.

Instead of being designed to prevent a landing upon any part of the coast, as many seem to suppose, and some to allege in proof of extravagant views on the part of the system of defense, the system often leaves this landing as an open alternative to the enemy, and aims so to cover the really important and dangerous points as to necessitate a *distant* landing and a march towards the object through the people. It is because the expedition would otherwise easily accomplish its object without landing, and without allowing the population to partake in the defense, that the fortifications are resorted to. For instance, without forts low down in Delaware Bay, an enemy could place his fleet of steamers in front of Philadelphia by the time his appearance on the coast had been well announced throughout the city, and in spite of all New Jersey, Delaware, and Lower Pennsylvania, he could levy his contributions, and burn the navy-yard and shipping, and be away in a few hours. But being obliged by the forts above mentioned to land full 40 miles below the city, the resistance to his march may be safely left to the courage and patriotism that will find ample time to array themselves in opposition.

A distant landing is deemed to be a great advantage to the defense in all cases; and in populous districts, if the forts be sufficient for this particular duty, it makes the security complete.

It is no part of the task assumed by the system of fortifications, as has just been stated, to guard against the invasion and protracted occupation of a well-peopled district, or of a point around which the forces of the country could soon be rallied. But there are places important in themselves, or necessary to the general welfare, that have not the advantage of a large population at hand or within call, and which may nevertheless be very tempting objects to an enterprising enemy. The harbors of the Dry Tortugas and Key West, and the navy-yard at Pensacola will, for instance, in time of war, be of infinite value in reference to the commerce of the Gulf of Mexico. Their destruction would therefore be a great object with a maritime enemy, and must depend wholly on the strength and state of readiness of their defenses. The same may be said of Forts Jackson and Saint Philip, on the Mississippi, 73 miles below New Orleans. They are surrounded by vast morasses and swamps, and are almost entirely inaccessible by land from any direction.

There are, no doubt, certain points less equal to self-defense than others, and where the preparation must be greater. Of this class is the delta of the Mississippi, not only in consequence of its many avenues of approach, but because its great natural highway does not at present allow those lateral supplies of the *personnel* which, from geographical formation and from the state of the settlements, can be speedily thrown upon most other points of the country.\*

Although this department is fully aware of the importance of affording permanent and as perfect protection as may be possible to the whole coast, it regards that section embraced by the shores of the Gulf of Mexico as the most exposed and the most important. It is true that the coast to the eastward of Cape Hatteras possesses points that may attract the attention of an enemy, and that, in the present state of things, the chances of success would justify a hostile enterprise, and are much greater than a wise provision would allow to exist. It is equally so that, however difficult of access the coast maybe from Cape Hatteras to Florida, the nature of a part of its population, and the facility afforded to an enemy, by its present neglected condition, to blockade and annoy the principal outlets of the valuable exports of that important portion of our country, require our early attention; still, the means of defense from Maine to Florida may be united together, and the parts may afford mutual succor to each other. But the coast of the Gulf of Mexico, on the contrary, is insulated and apart, and must depend

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\* Secretary of War Cass.

altogether upon its own resources. It constitutes the maritime frontier not only of Louisiana, Mississippi, Alabama, and of West Florida, but of Arkansas, Tennessee, Kentucky, Ohio, Missouri, Indiana, and Illinois, and the Territories of Wisconsin and Iowa, embracing nearly three-fourths of the territory of the United States; and it must be borne in mind that the evils which would result from the temporary occupation of the delta of the Mississippi, or from a successful blockade of the coast of the Gulf of Mexico, would not only injure the prosperity of these States, but would deeply affect the interests of the whole Union; and no reasonable expense, therefore, ought to be spared to guard against such a casualty.\*

Our fortifications and torpedoes, then, must close all of our important harbors against an enemy, and secure them to our military and commercial marine; second, must deprive an enemy of all strong positions where, protected by naval superiority, he might fix permanent quarters in our territory, maintain himself during the war, and keep the whole frontier in perpetual alarm; third, must cover the great cities from attack; fourth, must prevent, as far as practicable, the great avenues of interior navigation from being blockaded at their entrances into the ocean; fifth, must cover the coastwise and interior navigation; and sixth, must protect the great naval establishments. In these places are to be found objects that are in every sense of the highest value. On the one hand we see accumulations of military and naval material, and structure for naval accommodation that could not be replaced during a war, which are of indispensable necessity and of great cost; and on the other hand, the untold wealth of great cities. As these objects must be great in the eyes of the enemy—great for him to gain and for us to lose—corresponding efforts on his part must be looked for and guarded against.

There should now be stated, in a few words, our system of sea-coast defense, a system steadily pursued from the first by this department, but modified from time to time as new improvements in attack and defense of coasts have been introduced.

Fortifications must command from the shores exterior to our harbors all the waters from which the enemy can reach our cities and navy yards with his shot and shell; the harbor mouths, and all the narrow passes within them, must also be occupied, and if nature has not afforded all the positions deemed requisite, others must, if practicable, be formed artificially. Fortifications should succeed each other along the channels of approach and in our harbors, so that the enemy may nowhere find shelter from our fire while lying within our harbors, should he succeed in passing the outer lines of works. The harbor mouths and channels must be obstructed by lines of electrical torpedoes for holding the enemy's vessels under fire of the fortifications, previously constructed and stored in the latter, and laid, on the advent of war, in systems, the plans of which have been carefully elaborated in time of peace, by studies of the local charts and tidal currents, each harbor having its own system recorded in this department. The wires, for conducting the current from the electric apparatus on shore, must at the same time be laid securely in subterranean galleries carried out to deep water, and the electric machines themselves—the hearts of the torpedo system—must be placed in chambers within the fortifications, hidden from the enemy, and secured beyond all peradventure from his direct and curved fire. These galleries and chambers must be covered with heavy masonry arches and great masses of earth, and the former, to be efficient, must be indurated, and the latter, compacted by time. The torpedo lines must be served by officers selected from the Engineers and the Artillery, assisted by detachments from a Torpedo Corps of intelligent and skilled engineer soldiers, and both officers and men must be thoroughly in-

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\*Secretary of War Poinsett.

structed in the theory and practice of electricity and torpedo obstructions, for they must know how to render the torpedoes instantly harmless for our own vessels, or active against an enemy's.

Heavy mortars must be placed in large numbers to command all those positions where an enemy is likely to anchor within their range, either for the purpose of tampering with, or destroying our torpedo lines, or shelling our cities and public depots of military and naval supplies. The efficiency of mortar batteries against shipping is acknowledged by all military engineers; it is fully appreciated by the navies of all nations, and they are comparatively inexpensive.

Our guns and mortars must be capable of piercing the sides of his iron-clads and of breaking in his decks, and they must be mounted in numbers sufficient to make it impossible for any of his fast-running war steamers to get past our works.

The method of defense by fortifications and torpedoes—torpedoes for holding the enemy's vessels exposed in front of the fortifications, and fortifications for (among their other duties) protecting their torpedo lines, is the most efficient and the least expensive one that can be devised. The cost of such vessels as the British ship *Inflexible*—4 guns—as we learn from a recent government publication, is not less than \$900,000 per gun,\* while the cost of permanent fortifications need not exceed one-tenth of that amount.

The cost of repair of the British iron-clads in 1873-'74 ranged from \$20,000 to \$50,000 per annum each,† while the cost of repair of permanent fortifications is comparatively trifling.

Only a small number of our existing fortifications are what may be called new, that is, planned in accordance with the requirements for resisting modern heavy ordnance, and these works are in all cases earthen barbette batteries. Nearly all of the other works have been handed down to us from former periods, when small guns and wooden ships were to be contended with, some of them even dating back into the last century. But the great powers of Europe do not place their reliance for maritime defense on barbette batteries. They believe in, and are constructing, casemated forts, some of which are provided with wrought-iron scarps and others with iron casemate shields, to protect the guns and the gunners serving them from direct and curved fire. This department, while recommending and urging the construction of barbette batteries for the partial defense of some of our most important harbors, and the entire defense of others of less importance which are in some degree protected by the shallow water of the channels leading to them, has always insisted that the efficient service of heavy guns mounted in these batteries requires very high parapets and depressing or counterpoise carriages—carriages which can be lowered under cover of the parapets while being

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\* The *Inflexible*, the *Dreadnought*, and the *Alexandra* are among the latest examples of British armored ships. The *Inflexible* and the *Dreadnought* are double-turret ships, the former carrying an armament of four (4) 81-ton guns, and the latter an armament of four (4) 38-ton guns. The *Alexandra* is a broadside armored ship, carrying an armament of twelve guns of smaller calibers, viz, two (2) 25-ton guns and ten (10) 18-ton guns.

“The *Inflexible* is estimated to cost £521,750, the *Dreadnought* £508,395, and the *Alexandra* £521,500.”—*King's European Ships of War*, 1877.

† “Here it will be seen that in 1873-'74 the largest expense was incurred for the repair of iron-clads. It is also worthy of remark that a small number of vessels only was dealt with, as a reference to the accounts would prove. Thus, in that year alone the *Achilles* cost £24,907; the *Bellerophon*, which had cost nearly £30,000 in 1870, was again, in 1873, charged with an expense of £40,395; the *Minotaur* cost, in this year, £16,691; the *Northumberland*, £10,255; the *Resistance*, £31,637, and the *Warrior* the large sum of £50,000.”—*King's European Ships of War*, 1877.



loaded. It has also foreseen from the time of the introduction of modern armor and ordnance, which commenced during our late civil war, that the iron plating of ships must lead to the iron plating of forts; and that, as there is a limit to the weight of armor a ship can carry, while there is practically no limit to the weight a fort may bear, forts must retain the supremacy they have always had. The department has therefore looked forward to the conversion of those of our casemated works which would admit the change, for the reception of guns of the heaviest calibers and for armor plating,\* and, in some instances, to the construction of new works.

From 1869 to 1875, while appropriations for coast defense were granted by Congress, much progress was accomplished in our earthen batteries, and various modifications were made in the plans of these batteries by which their strength was greatly increased, by adding to the thickness of parapets; by frequently interposing high and bonneted traverses between the guns to guard from enfilade fire and from splinters; by adding to the combined masonry and earth coverings of magazines; by increasing the heights of the parapets, and by introducing monolithic masses of hydraulic cement concrete for the platforms of the guns in lieu of the granite blocks previously used for this purpose. No appropriations have been made for the construction of fortifications since the latter of the above mentioned years, and the sudden failure of appropriations left these earthen batteries in all stages of incompleteness, some just commenced, some nearly finished; and by reason of their incompleteness, the storms and the waves have been undoing much of what had been accomplished. The same may be said of the earthen mortar batteries, which were commenced during the same period.

In conclusion: with old casemated works (than which there were none better in the world in their day) designed long before the introduction of the 800 to 2,000-pounder rifled guns into modern warfare; their walls pierced for guns long since out of date; without iron armor or shields, and but partially armed, even with the old ordnance; with old earthworks, some of them built in the last century; with new ones for modern guns and mortars but partially built and rapidly being destroyed by the elements by reason of their incompleteness; with gun batteries without guns, and mortar batteries without mortars; with no carriages whatever for barbette guns of large size, except such as require the cannoniers to load from the tops of parapets, from which they can be picked off in detail by the enemy's sharpshooters; with an excellent defensive torpedo system developed at our torpedo school at Willets Point, but only partially carried into effect; with but a very small number of our works prepared with the torpedo casemates and galleries necessary for securing the electrical apparatus from the enemy's fire, and for conducting the electric wires to the torpedo lines which must be laid when the day of trial comes; and with less than 200 engineer soldiers educated for torpedo and other engineer service instead of the 752 men now authorized by law, and of whom not less than 520 ought to be ready to supply the detachments required for torpedo duty in our fortified harbors, we can make but a feeble defense against the powerful fleets now prepared and rapidly increasing which will sooner or later be brought against us by some of the most powerful maritime nations on the earth, or by others nearer at hand whose offensive naval means exceed our own, and whose powers are not to be despised.

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\* We have the assurance that iron plates can be manufactured in this country equal in magnitude, and not inferior in quality, to those which twenty years of experience have enabled the English rolling-mills to turn out.



The estimates submitted, based on the several estimates of the officers in charge exhibit the amounts which are deemed necessary by this department for the commencement, the continuance, or the completion of the several works of defense during the next fiscal year.

Special attention is invited to the estimate of \$100,000 for providing torpedoes to be stored in our fortifications and planted, on the advent of war, in the channels and fairways of our harbors, and for providing the electric apparatus by which the torpedo lines are to be fired. It is for procuring and storing torpedoes and such portions of the apparatus as cannot readily be obtained in the event of sudden hostilities that the appropriation is asked.

Special attention is also asked to the item of \$100,000 for preparing our most important fortifications for operating torpedo lines, by providing bomb-proof chambers for the electrical apparatus, and the bomb-proof subterranean galleries through which the electric wires are to be carried to deep water; all these being essential to the operation of the torpedo system of defense in connection with the fortifications themselves.

I beg leave to quote the following extract from the report of the Board of Engineers for the fiscal year 1878-'79, respecting the necessity for increasing the number of enlisted men in the Battalion of Engineers:

It is the duty of the board to again invite attention to the urgent necessity of increasing the number of enlisted men of the Battalion of Engineers sufficiently to enable them to properly perform the new duty assigned them by Congress of acting as a Torpedo Corps for the defense of our extended coast. The minimum force consistent with reasonable efficiency has been carefully estimated at 520 men, and the number now available is only about one-fourth of that figure. No increase in the legal organization nor in the number of officers is required. A provision, authorizing the President to recruit the companies to the standard now authorized by law, will supply the needful number. The duty is perhaps more technical than any other in the Army, and requires special qualifications and special training; and the men are equally as available for other duties in an emergency as those enlisted in the other three combatant arms of the service.

The Board of Engineers, in its annual report for the last fiscal year—which will be found further on in this report—even more strongly urges the importance of the torpedo service, and the increase of the Battalion of Engineers desired, and I heartily concur in its recommendations, which are thus stated:

For several years the board has urged in its annual reports the importance of increasing the number of enlisted men of engineers under training to fit them for submarine mining. The legal organization of the battalion provides for 752 enlisted men; but, in consequence of the reduction of the Army, and the necessity for troops on the plains, the force authorized to be enlisted is only 200 men, and of these 50 are stationed at West Point on special duty, which prevents their receiving drill or instruction in this new and important duty assigned by Congress to the engineer troops. We have, therefore, only 150 men, even on paper, who possess any knowledge of the planting or serving of the submarine defenses designed to cover our whole extensive sea-coast. The work is technical, requiring special qualifications and special training not to be found in the soldiers of the other arms of service, nor among the volunteers.

This statement is a sufficient reason for increasing our present force; but if additional argument be needed, it is found in the fact that now, in time of peace, Great Britain maintains at Bermuda or Halifax, almost in our own waters, six companies, or probably from three to four times as many engineer soldiers, instructed in torpedo warfare, as we have to depend upon to cover our whole coast from Maine to Alaska.

In this connection the board would invite attention to the last annual report of the General of the Army, which suggests providing troops for special needs not connected with service against the Indians, by a law authorizing their recruiting, in addition to the 25,000 men that now constitute the entire Army (except the Signal Service, which is already provided for upon a plan similar to that now suggested). If the importance of this increase were thoroughly understood, it might result in authorizing the minimum number of engineer soldiers (520) needed to be kept under training in submarine mining. No increase in officers, nor change in the legal organization of the battalion would be required, and being regular soldiers, thoroughly instructed in infantry tac-

tica, the men would be as available in any sudden emergency as any other troops in the service.

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## BOARDS OF ENGINEERS.

### •THE BOARD OF ENGINEERS.

The Board of Engineers stationed at New York City, consisting of Col. J. G. Barnard, Col. Z. B. Tower, Col. John Newton, Lieut. Col. Henry L. Abbot, and, when so ordered, the officer in charge of the work under consideration, has been engaged in the duties which have from time to time been referred to it, and it has submitted the following summary of its operations:

*Coast Defenses.*—The studies of the Board have been mainly directed during the past year to providing additional defenses on the southern and eastern approaches to New York Harbor, by means of iron turrets; and a preliminary report thereon was submitted June 26, 1880. In that report is briefly set forth the rapid advance made in heavy ordnance during the past decade, and its influence in modifying the methods of sea-coast defense among foreign nations, and the probability that it will necessitate the abandonment of masonry scarps, except for special localities, and compel the use of iron as the protection to the shore gun, whether used as a revolving turret or as a continuous scarp. Though the great powers of Europe have devoted unceasing study and experiment, with large expenditures, to the problem of attack and defense by land and sea, it is doubtful if their experience has resulted in a definite and satisfactory project for applying the foregoing principle to harbor defense. While it seems probable that the sea turret will be adapted to shore service, no nation has as yet made the adaptation on an adequate scale or in a manner at all commensurate to the requirements of a harbor of national importance like New York.

The general plans accompanying the Board's report provide three turrets for Sandy Hook, two for Staten Island, and two for the site of Fort Lafayette at the Narrows. On the eastern approach studies have been made for two turrets on Fort Schuyler or exterior thereto, and two for Willets Point. The general plans of these latter were not ready to be forwarded with the report.

Drawings modifying the unfinished fort at Willets Point for the reception of 7 81-ton guns have also been completed during the past year, but have been retained for further study in connection with the adaptation of turrets thereto.

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*River and Harbor Improvements.*—The question of the improvement of the Wisconsin River was transferred to the Board by department letter of September 5, 1879, and Colonel Houston was assigned as a member thereof while this subject was under consideration. At its session of the 9th September the Board determined to examine the river before reporting a plan for its improvement. Accordingly, on the 19th of September, all of its members on duty, with Colonel Houston and his assistant, left Portage City on the *Ellen Hardy* and steamed slowly down the Wisconsin by day, taking note of the river, to its entrance into the Mississippi near Prairie du Chien.

On the 24th October the discussion of the subject was renewed in New York, with Colonel Houston present, and continued until November 6, when an adjournment was had to allow the final preparation of the report, which was submitted to the Department on the 24th of November, 1879.

Meanwhile the Board had submitted a report (September 29) as to the disposition to be made of the raft prepared for trial as a channel obstruction, which was then in store at Fort Foote, Md.

The project of Major Barlow for a breakwater at the entrance to New Haven Harbor, Connecticut, referred to the board by department letter of September 8, 1879, was taken up October 3, and after some discussion a visit to the locality was determined upon. The visit was made October 10, but other duties delayed the consideration of this subject, so that the report of the Board was not submitted until November 24.

The question of the improvement of Mobile Harbor, Alabama, with plans and estimates therefor, prepared by Major Damrell, the engineer in charge of the work, was taken up for consideration November 24, and occupied much of the attention of the Board until February 28, 1880 (Major Damrell being present from January 7 to January 12), when its views in reference thereto were presented in a report of that date.

On the 30th January, 1880, was referred to the board a protest signed by Messrs. Samuel Schuyler and John H. Starin against General Newton's proposed plan for the improvement of the Hudson River at New Baltimore.

The consideration of this subject was entered upon February 3. General Newton preferring not to participate in the proceedings of the Board while his plan was under discussion, was excused. He furnished, however, all maps and papers needed, and was present to give any desired information in relation thereto, as was also Lieutenant Willard, his assistant on this work of improvement. The question was very thoroughly discussed, and the views of the State Engineer, Mr. Seymour, and those of Mr. Schuyler and other prominent steamboat owners obtained by personal interviews in response to invitations of the Board. On the 5th of March the Board submitted its report thereon to the department.

Colonel Macomb's project for the improvement of the Manasquan River, New Jersey, was considered during the month of March, he being a member of the Board during its consideration, and a report thereon was made April 6, 1880.

Major Benyaurd's projects for the improvement of the mouth of the Red River, Louisiana, were under the consideration of the Board from March 17 to April 20, when its views thereon were submitted in a report of that date.

On the 6th of April the Board reported adversely to the request of the Light-House Board for authority to level a portion of the parapet of Castle Pinckney, South Carolina, and on the 23d instant submitted its views in reference to the question of obtaining a greater depth of water at the government wharf at Fort Hamilton, New York Harbor, by means of dredging.

By Department letter of May 15, 1880, was referred to the Board the petition to Congress of Mr. Herman Haupt and the Pittsburgh Chamber of Commerce, asking for an examination of the plans of the former for the improvement of certain rivers, together with letters of the manager of the River Improvement Company asking for a trial of the system. This subject is still under consideration.

A communication from the Committee on Commerce, House of Representatives, to the honorable Secretary of War, covering a resolution of the committee in regard to House bill 3042, Forty-fifth Congress, second session, "To create a permanently deep, wide, and straight channel through the Sandy Hook bar of the port of New York," &c., according to the plans of Mr. H. F. Knapp, was referred to the Board by department letter of June 10, and its consideration is yet before the Board.

In addition to their duties as members of this Board, Generals Tower and Newton were more or less engaged during July, August, and September, 1879, in the examination of officers of the Corps of Engineers for promotion. They also served in the summer of 1879 on a special Board, to which was referred the subject of improving Pass Cavallo Inlet, Aransas Pass and Bay and entrance to Galveston Harbor, Texas, reporting thereon August 9, 1879, and again April, 1880, carrying out their previous recommendations; they resumed the consideration of the questions relating to Galveston, upon which their views were presented in a report of June 7.

General Newton has served since December, 1879, on the Court of Inquiry to inquire into General Warren's conduct as commander of the Fifth Army Corps at Five Forks, Va., &c.; and further, Generals Newton and Abbot have been continued in charge of important works independent of their duties in connection with the Board of Engineers.

**Torpedo Defense.**—The purchase and storage at the forts of the material approved for the defense of the harbors and navigable channels of the United States has been continued during the past year, so far as permitted by the small appropriation (\$50,000) granted by Congress. A much larger sum might be judiciously used, and, in the present unsatisfactory condition both of forts and armaments, an increase in the annual appropriation for torpedoes is urgently to be recommended.

Since the subject of sympathetic explosions of dynamite has a very important bearing upon countermining operations, it has received systematic investigation at Willets Point during the past year with a view (1) to develop the mathematical law connecting the size of the charge with the maximum exploding range; (2) to discover the effect of varying the material of the case containing the secondary charge; and (3) to determine the effect of varying the density of the dynamite.

Many charges, varying from one-quarter of a pound to five hundred pounds, have been fired by Lieutenant-Colonel Abbot, the executive member of the Board for those trials, under such conditions and with such results as to lead him to report the following conclusions:

I. Provided the primary charge be submerged sufficiently to develop the effective kinetic energy of the explosion, the ranges at which sympathetic explosions of dynamite No. 1 will or will not occur may be predicted from the following formula, by substituting for B certain limiting values given below. D denotes the range expressed in feet, and C the charge expressed in pounds.

$$D = B\sqrt{C}$$

II. The density of the dynamite is nearly as important an element, under certain circumstances, as the nature of the envelope itself, and together they exert a controlling influence upon the result.

III. The limiting values of B in the above formula are approximately the following:

Charge compacted or loose in oiled paper, or compacted in unsoldered thin tin or thin glass cylinders .....	18	>B<	21
Charge loose in unsoldered thin tin or thin glass cylinders.....	6.7	>B<	9.3
Charge compacted in thin glass vials .....	9.0	>B<	12.6
Charge compacted in thick glass bottles .....	3.8	>B<	5.1
Charge compacted in pine 1" thick .....	6.9	>B<	8.6
Charge compacted in stout brass .....	5.0	>B<	6.3
Charge loose in stout brass.....	1.7	>B<	2.8
Charge compacted in iron 1.25 inches.....	0.0	>B<	0.5

It also appears that the phenomenon of sympathetic explosion rarely or never occurs with a resisting envelope, *unless the latter be crushed,*



The practical results of the investigation may be summed up as follows:

To avoid sympathetic explosions of dynamite No. 1, the secondary charge should be in a loose state and encased in an envelope strong enough to resist the shock without crushing. Under these conditions no induced explosion has ever occurred at Willets Point.

To cause sympathetic explosions—as, for example, in the simultaneous ignition of many subaqueous charges in economical blasting operations—the dynamite of the secondary charges should be solidly compacted in thin envelopes, which will allow the water pressure to act directly on the explosive. If the charge is to be left long in position test tubes of *thinnest* glass, solidly filled with dynamite and projecting from the charge, may be employed as detonators. To insure success the temperature of the water must be above 45° Fah.; for, if the nitro-glycerine should congeal, the conditions of the above experiments would be essentially modified, and failure would be probable.

During the year an elaborate set of experiments has been undertaken with an electrical fish torpedo, designed to be started by electricity from the shore. It is the invention of Mr. W. S. Sims, and was offered for trial by Mr. W. F. Bridge, both of New York.

Preliminary trials, at the dock and in motion, were made with an experimental torpedo which had been gradually developed and improved by the owners. The results showed the device to possess merits of so high an order that a contract was entered into with Mr. Bridge to supply the government with a new one, including all the improvements which had been suggested by his long series of experiments. This fish is now ready for the official trial, and the needful preparations for operating it from the shore at Willets Point are essentially completed. Before the close of the season the results will be made the subject of a special report.

The usual routine of trials and experiments with different parts of the system of submarine mines developed at Willets Point by Lieutenant-Colonel Abbot has been continued during the past year, but the chief work in hand has been the reduction and tabulation of the records for publication. Good progress has been made, the chapters upon subaqueous explosions, electrical fuzes, and igniting apparatus being nearly completed. There are now in the hands of the Board 278 quarto pages, with 21 plates, all printed by soldiers of the Battalion of Engineers. As the subjects treated in these chapters are in the main general in their nature, and cover original matter of interest in rock blasting conducted by Officers of Engineers, there seems to be no reason why they should not be published for the use of the Corps. The remaining chapters, which will treat of the special researches upon which the details of our approved patterns of submarine mines, torpedo cable, torpedo operating apparatus, electric lights, fish torpedoes, &c., have been established, will be of a confidential character, and should be held in reserve, at least for the present.

*Recommendations by the Board.*—For the purchase of torpedo materials and for instructing the Engineer troops in the use of the same, and for continuing the trials designed to perfect the system, an appropriation of \$100,000 is recommended.

A special appropriation is urgently needed to prepare the forts in our chief harbors to serve as operating stations for submarine mines. Perhaps the importance of this matter will be better understood if set forth in greater detail than heretofore in our annual reports.

A channel which must be kept open to our own vessels cannot be de-



fended by ordinary contact mines like those which proved so destructive during the late war. They are dangerous alike to friend and foe and bar all passage. Hence we can only use electrical mines. They are operated by means of electrical cables connecting them with the casemate in which the batteries, &c., are placed, and if any serious injury occurs to one or more of these cables the mines become valueless. Hence it is absolutely necessary that a route leading from deep water into the fort shall be provided which is at no point exposed to injury by bombardment. If this condition be neglected a single well-directed shot may open the channel to the enemy by cutting off the cables leading to the groups of mines.

Again, a casemate must be provided entirely secure against chance of injury by bombardment wherein to use the electrical batteries and operating apparatus upon which the efficiency of the system of mines depends. Such casemates exist in some of our forts; in others they must be built.

In general, therefore, a casemate must be selected and prepared or built, a mining shaft must be sunk in the floor, and a mining gallery must be driven under the foundations of the fort and extended at least to low-water mark. This work requires time, and if delayed until the breaking out of hostilities, the enemy will probably sail through the channel before the mines can be made effective to bar his way.

For these reasons it is important that those upon whom rests the responsibility of providing for national defense should understand not only that our forts are in an unsatisfactory condition, and our supply of heavy ordnance inadequate to the needs of the country, but, also, that no dependence can be placed even on the torpedoes already in store, unless timely provision be made for preparing our forts to operate them. Not less than \$200,000 should be made immediately available for this work.

For several years the Board has urged, in its annual reports, the importance of increasing the number of enlisted men of engineers under training to fit them for submarine mining. The legal organization of the Battalion provides for 752 enlisted men; but, in consequence of the reduction of the Army and the necessity for troops on the plains, the force authorized to be enlisted is only 200 men, and of these 50 are stationed at West Point on special duty, which prevents their receiving drill or instruction in this new and important duty assigned by Congress to the engineer troops. We have, therefore, only 150 men, even on paper, who possess any knowledge of the planting or serving of the submarine defenses designed to cover our whole extensive sea-coast. The work is technical, requiring special qualifications and special training not to be found in the soldiers of the other arms of service, nor among the volunteers.

This statement is a sufficient reason for increasing our present force; but if additional argument is needed, it is found in the fact that now, in time of peace, Great Britain maintains, at Bermuda or Halifax, almost in our own waters, six companies, or probably from three to four times as many engineer soldiers, instructed in torpedo warfare, as we have to depend upon to cover our whole coast from Maine to Alaska.

In this connection the Board would invite attention to the last annual report of the General of the Army, which suggests providing troops for special needs not connected with service against the Indians, by a law authorizing their recruiting in addition to the 25,000 men that now constitute the entire Army (except the Signal Service, which is already provided for upon a plan similar to that now suggested). If the impor-

tance of this increase were thoroughly understood, it might result in authorizing the minimum number of Engineer soldiers (520) needed to be kept under training in submarine mining. No increase in officers nor change in the legal organization of the Battalion would be required; and being regular soldiers, thoroughly instructed in infantry tactics, the men would be as available in any sudden emergency as any other troops in the service.

#### BOARD OF ENGINEERS FOR THE PACIFIC COAST.

The Board has consisted of the following officers: Lieut. Col. C. S. Stewart, Lieut. Col. R. S. Williamson, Lieut. Col. G. H. Mendell, First Lieut. A. H. Payson, recorder, with whom Maj. G. L. Gillespie has been associated in the discussion of certain of the subjects brought before it.

During the year the Board has had under consideration and reported on the locating a breakwater and harbor of refuge on the Pacific Coast between San Francisco and the Straits of Fuca; on the improvement of Coos Bay, Oregon; on the canal at the Cascades of the Columbia River, Oregon; and on the entrance to Yaquina Bay, Oregon.

#### BATTALION OF ENGINEERS.

The strength of the Battalion of Engineers on June 30, 1880, was 16 commissioned officers and 194 enlisted men.

It was commanded by Lieut. Col. Henry L. Abbot, and was stationed as follows: The headquarters and Companies A, B, and C at Willets Point, New York Harbor, and Company E at West Point, N. Y. Company D exists only upon paper at present, owing to the reduction of the Battalion below its legal organization to comply with the law restricting the Army to 25,000 men.

No regular system of recruiting has been carried out during the past year, vacancies being filled by enlistments and re-enlistments at the posts where they occur, and by special assignment from the general depot of the recruiting service at David's Island, in New York Harbor.

The changes during the year have consisted of 4 deaths, 47 discharges, 8 desertions, 27 re-enlistments, 13 enlistments, 17 recruits received from depot, 1 deserter apprehended, and 3 transfers from other arms of service.

The Battalion of Engineers by law is officered by the temporary assignment of officers of the Corps of Engineers, and advantage has been taken of that fact to make it a military school of application for the engineer service. The companies are commanded by captains who usually serve about four years before being relieved. The adjutant and quartermaster are usually first lieutenants, who remain for a like period. The lieutenants on company duty consist of recent graduates from the Military Academy at West Point, who as a rule serve with the Battalion at Willets Point between two and three years before becoming eligible for other duty. This tour not only renders them familiar with service with troops, and with the special military duties of their arm, but also affords them every facility for learning the practical use of astronomical, surveying, meteorological, and other instruments, and for studying electricity and photography in well-furnished laboratories, where alone such branches can be properly mastered.

The military duties of Engineer troops are perhaps more extensive and varied than those of any other of the four arms. They include field fortifications, the attack and defense of permanent works, sapping, mining, pontoniering, military reconnaissances, military map drawing

and duplication by photography, and the defense of the coasts by submarine torpedoes. Such duties are largely technical, and compel a careful selection of the men and thorough training. The latter they receive at Willets Point, so far as the limited force will permit.

In addition to this special preparation, needful to fit them for the important duties which devolve upon them in time of war, the troops at Willets Point guard the large stores of public property there in depot; receive and issue the astronomical, geodetic, and other instruments in use by the Corps of Engineers; and perform much skilled labor in the way of remodeling the bridge equipage, printing confidential engineer documents, and other work of a similar character.

They are organized and thoroughly drilled as infantry, and have proved themselves on several occasions to be as efficient in special emergencies as any other body of troops in service.

The legal organization of the battalion is five companies of 150 enlisted men each, making a total, including two staff sergeants, of 752 men. This number is not in excess of the urgent needs of the government, but at present only 200 men are allowed to be recruited, including 50 men at West Point detached on special service at the Military Academy. The result of this excessive reduction is to endanger the efficiency of the engineer service, and to prepare the way for failure when the first crisis arrives.

The military requirements of the country are not restricted to maintaining order among the Indian tribes, although this is so pressing that it must of course regulate the organization of the Army when reduced below the safe minimum. It is necessary to provide for foreign complications as well. But in civilized warfare the engineer arm is universally recognized as a component part of the fighting force of every army in the field.

In the present condition of affairs on the Indian frontier engineer troops have duties to perform there which cannot be rendered, because the men are not in service. Again and again applications from department commanders for engineer soldiers trained to make military maps have been necessarily refused because with the present authorized force they were not available.

It should not be forgotten that since the present legal organization (752 enlisted men) was fixed by Congress that body has added the duty of defending our coasts with torpedoes to those already assigned by law to the battalion. Not less than 520 specially-instructed men would be required for this work alone immediately upon the breaking out of war with a maritime power. At present they could not be found in the country.

For these and other reasons, which I will not repeat, I desire to urgently renew the recommendations of my predecessor and myself that authority be granted to recruit the battalion to its present legal standard. No increase of officers would be required, and no change in the organic law. The present reduction is solely due to the provision that the Army shall not exceed 25,000 men, and the pressure for troops to maintain order among the Indians has been so great as to reduce the organization for protecting our coasts with torpedoes, and more generally for all forms of civilized warfare, beyond the safe limit.

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#### ESTIMATE FOR AMOUNT REQUIRED FOR MILITARY SURVEYS AND RE- CONNAISSANCES IN MILITARY DIVISIONS AND DEPARTMENTS.

For military surveys, reconnaissances, and surveys of military reservations by the engineer officers attached to the various headquarters of

military divisions and departments, being an average of \$5,000 for each of the nine military divisions and departments west of the Mississippi River, and \$5,000 for publication of maps; total, \$50,000.

#### OFFICE OF THE CHIEF OF ENGINEERS.

In the labors of the office, the Chief of Engineers was assisted, on the 30th of June, by the following officers in charge of the several divisions:

FIRST AND SECOND DIVISIONS.—*Fortifications, Battalion, and Engineer depot, Lands, Armaments, Personnel, &c.*, Maj. George H. Elliot.

THIRD DIVISION.—*River and Harbor Improvements, &c.*, Lieut. Col. John G. Parke.

FOURTH AND FIFTH DIVISIONS.—*Property accounts, Estimates, Funds, Survey of the Lakes, Explorations, Maps, Instruments, &c.*, Capt. Henry M. Adams.

Very respectfully, your obedient servant,

H. G. WRIGHT,  
Chief of Engineers,  
Brig. and Bvt. Major-General.

Hon. ALEXANDER RAMSEY,  
Secretary of War.

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#### REPORT OF THE BOARD OF VISITORS TO THE MILITARY ACADEMY.

SIR: The Board of Visitors appointed by the President of the United States and by the Senate and House of Representatives to attend the annual examinations at Military Academy met at West Point June 1, 1880, and organized as follows: General Robert Patterson, president; Hon. George F. Edmunds, vice-president; and General James Grant Wilson, secretary.

The following committees were, for mutual convenience, appointed by the chairman, he being *ex officio* a member of each committee:

1. *Buildings and grounds, including water supply and sewerage.*—General Van Vliet, Hon. J. F. Philips, and Mr. Aultman.

2. *The Corps of Cadets, the relations of the government and instructors of the institution to the cadets, and of the classes and cadets with each other.*—Senators Garland and Edmunds, and General Wilson.

3. *Discipline, including drill and police.*—Colonels Preston and Clark, and Hon. William H. Felton.

4. *Education and the library.*—General Wilson, Senator Edmunds, and Hon. William McKinley, jr.

5. *Examination of candidates for admission.*—Hon. John F. Philips, General Van Vliet, and Colonel Preston.

6. *Fiscal affairs, including commissary and mess and hospital supplies.*—Hon. William H. Felton, Senator Garland, and Colonel Clark.

The board held at least one session daily at their office from June 1 to 11, inclusive, and a majority of the members were in attendance at the library and elsewhere during the examination of the first or graduating class. Several of the board remained until the conclusion of the examinations of the remaining three classes, as well as to the examination of the candidates for admission to the Academy.



## BUILDINGS, GROUNDS, WATER SUPPLY, AND SEWERAGE.

The board have examined the new hospital, and find from the report of the engineer officer in charge that a further appropriation by Congress of \$21,617.84 will be required to complete the building. It has been erected in the most substantial manner. In view of its great importance, and the ruinous policy of permitting a valuable and necessary public building to remain in an unfinished condition, the board most earnestly recommend an appropriation for its speedy completion. Should this be done, the old hospital will furnish accommodation for officers at West Point which is at present insufficient.

On inspection of the cadet quarters, the board find that they are inadequate to their proper accommodation, many of the rooms at present being occupied by three cadets, which overcrowds them and is likely to interfere with health and a proper attention to their studies.

Plans have been drawn and estimates made for extending the west wing of the barracks, so as to add thirty-two rooms, and your board recommend that Congress be asked to appropriate the necessary sum for this purpose.

The board further recommend that a bathing-house be erected for the use of the cadets. The river where they now bathe is exposed and exceedingly dangerous, several cadets having been drowned. It would seem scarcely necessary to refer to the importance of bathing and of the cadets enjoying reasonable facilities for learning to swim, an acquirement which should be possessed by every officer of the Army. The cost of a suitable bath-house would be \$2,400.

The board find, upon careful examination, that the water supply and sewerage are sufficient for the convenience and health of the Academy and the post.

## DISCIPLINE, INCLUDING DRILL AND POLICE.

The board find that the regulations for the Military Academy, as set forth in Article XII, have been fully and faithfully executed, and it has not seen or heard of anything in the administration of the discipline which would suggest the propriety of a change, either in the articles or in the mode of enforcement. The system is purely military, and is the result of many years of close observation and experience of those who from time to time have had charge of the institution, and who appear to have been actuated by the desire to make it efficient in educating and training the cadet for all the duties of a soldier and officer. It enforces order, neatness, and regularity in his habits; promptness and precision in obedience to and execution of orders; manliness, self-reliance, and truth in every position and relation of life. By the prompt, equitable, and just enforcement of the regulations by those in command—and these regulations are printed for and made known to every cadet—no ground of complaint is possible, and each one is made to feel that his success or failure depends upon himself alone.

The board inspected the quarters, mess hall, and, in short, all the buildings of this department, and found them in thorough order and repair. They are admirably arranged for the convenience, comfort, and discipline of the young soldier. Neatness, quiet, and order pervade the establishment in every department, and reflects credit alike upon the commandant of cadets and instructor of tactics, and the officers and cadets under his command.

In the judgment of the board, the drill merits the highest commenda-



tion. The precision and celerity with which every evolution is executed alike in the artillery, cavalry, and infantry, prove the thoroughness of the training and the efficiency of the officers and corps of cadets.

#### EDUCATION AND THE LIBRARY.

The board are of the opinion that the standard of acquirements as a condition precedent to an admission to the United States Military Academy imposes upon the corps of instructors duties which may quite as well be performed by the teachers in the common schools throughout the land. It would seem that instruction in spelling, in arithmetic, in the rudiments of English grammar, and in punctuation, ought not to be required of professors and officers who are subsequently to teach mathematics, philosophy, chemistry, geology, and law.

As a consequence of this low standard for admission much valuable time is consumed in purely elementary instruction at enormous expense to the government, and a needlessly large proportion of cadets fail to sustain themselves in competition with those who properly start upon their academic course with a sufficient knowledge of those prerequisites, and with a consequent heavy pecuniary loss to the nation—a loss amounting to about \$1,750 per annum for each and every cadet.

Of the 220 discharged during the past four years more than one-half the number were recommended for dismissal by the academic board, being found deficient in their studies, while many others were from the same cause permitted to resign. (*Vide* Appendix A, attached to this report.) Cadets leaving the Academy, whether by dismissal or resignation, owing to lack of mental capacity, or inclination to keep abreast of their classmates, should not be permitted to return, as in most instances they are a second time found deficient and sent away. Aside from the serious disappointment to young men who thus fail to pass their examinations at or before the conclusion of their four years' course, the effect upon their subsequent career is greatly to be deprecated.

The board by no means advise such a radical change in the standard of admission as would exclude from the institution all save those who are thoroughly instructed in every branch of preparatory study; but they are strongly of the opinion that the best interests of the service and the truest economy to the country demand that the present standard for admission should be materially raised, or that much severer examinations should compel the candidate for admission to the Academy to be absolutely proficient in the requirements of the present low standard—a standard greatly below that required in similar European establishments—so that the highest efficiency of the service may be secured, not only through the character, but by the exact scholarship and the thorough scientific training of its officers.

The board do not deem it proper that more mental work should be required of the cadets, already heavily burdened, but the elimination from the course of purely elementary studies would admit of the introduction of higher branches, such as more advanced mathematics, military history, physiology, and greater attention to original composition, such as essays on professional topics, and to elocution, in which the board is unanimously of the opinion that the corps of cadets, with but few exceptions, are sadly deficient. Not one in ten speaks distinctly.

The members of the board have carefully investigated the library of the Military Academy, consisting of 28,000 volumes. It contains many rare and valuable works, and while Congress has been making a reasonably fair annual appropriation for its general increase, the present allow-

ance is inadequate, and the board therefore recommend that the appropriation for the library be increased from one thousand to two thousand dollars, the sum heretofore annually allowed till the year 1877. Owing to the reduction of the appropriation, large numbers of valuable books and periodicals now require binding, and for this purpose, and for the printing and binding of a complete catalogue of the library, the board recommend a special appropriation of one thousand dollars.

#### FISCAL AFFAIRS.

After a careful examination of the books of the treasurer and disbursing officer, the board find them neatly, accurately, and intelligently kept. Many vouchers were examined, and the board were assured that vouchers were on file covering all expenditures of the public funds. Its members are satisfied that the duties of this responsible position are accurately and efficiently discharged by Major Du Barry. The board also believes, after careful investigation, that the commissary and quartermaster stores are purchased as cheaply as practicable, and disbursed to the cadets as reasonably as could be expected, when the good quality of the articles distributed is taken into consideration.

The following financial statement is submitted, showing the receipts and expenditures of the Military Academy for the fiscal year ending June 30, 1880:

#### Expenses paid from general Army appropriations:

Pay of officers .....	\$100,000	
Pay of enlisted men .....	50,400	
Cost of forage, fuel, and straw for public horses and enlisted men .....	14,000	
	<hr/>	\$164,400 00
Treasurer in account with United States corps of cadets for the year ending April 30, 1880 .....		182,042 64
Appropriated for current and ordinary expenses for the year ending June 30, 1880 .....	45,915	
Buildings and grounds .....	14,000	
Increased water supply .....	40,000	
Miscellaneous expenses .....	12,840	
	<hr/>	122,755 00
Total amount ....		<hr/> 469,197 64

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In concluding this report, the board desires to express its pleasure at the promptness with which the superintendent and the professors and officers connected with the Military Academy responded to its requests for information to facilitate the labors of its committees.

All of which is respectfully submitted on behalf of the seven members of the Board of Visitors appointed by the President of the United States.

R. PATTERSON, of Pennsylvania,  
*President.*  
JAS. GRANT WILSON, of New York,  
*Secretary.*

JUNE, 1880.

The Hon. ALEXANDER RAMSEY,  
*Secretary of War.*

REPORT OF THE BOARD OF COMMISSIONERS OF THE  
SOLDIERS' HOME.

OFFICE OF THE BOARD OF COMMISSIONERS OF THE  
SOLDIERS' HOME, ROOM 2, WINDER BUILDING,  
*Washington, D. C., October 16, 1880.*

SIR: I have the honor to submit the annual report of the Board of Commissioners of the Soldiers' Home for the year ending September 30, 1880, as required by the regulations of the Home, Article I of which directs that the Board "at their meeting in October will make an annual report of their proceedings to the Secretary of War for the information of Congress."

The commissioners have met at the Home once every month during the year for the purpose of examining and auditing the accounts of the treasurer of the Home, and generally for the consideration of such matters pertaining to the interests of the institution and its inmates, personally, as required their action.

The property has been kept in thorough repair, and the buildings and grounds maintained in the excellent condition to which they had been brought under the care and labor unremittingly bestowed through a long course of previous years. At no time, perhaps, in the history of the Home has its condition been more satisfactory, so far as the property and its adaptation to the uses for which it is intended is concerned. But in matters pertaining to the inmates of the Home it is regretted that a less favorable report must be made. The reason for this is found in the results attending a change in the operation of the law relating to pensions of inmates which has taken place under a decision of the United States Supreme Court upon section 4820 of the Revised Statutes. The original statutes required *all* pensioners to surrender their pensions to the Home while they voluntarily continued to receive its benefits. An unfortunate and unintentional misconstruction of language in the Revised Statutes was discovered by an attorney more than three years after the date of the revision was adopted, and afforded so fair a promise for gain that the real welfare of hundreds of faithful old soldiers, in no wise connected with the issue, and the best interests of the Home, formed no obstacle to the subversion of a law which, more than any other, affected the internal management of the Home by its direction of means to uses for the good of many instead of as now supplying a few with superfluous funds very much of which is used to obtain intoxicating liquor, and becomes a curse instead of a blessing to the pensioners as well as the greatest source of trouble in the administration of discipline. The action by which this was brought about, may be briefly stated as follows: On the 2d day of October, 1877, the Commissioner of Pensions published his decision that pensioners who had been contributors to the funds of the Home were not required to surrender their pensions while receiving its benefits. On the 8th of the same month the commissioners of the Home submitted an argument against the decision and asked its revocation, which was declined. The question was then, on request of the commissioners, directed to the Secretary of War, referred to the Secretary of the Interior, who referred it to the Attorney-General. The decision of the latter was adverse to the ruling of the Commissioner of Pensions, and in agreement with the views of the commissioners of the Home. Some time afterward a test case was brought in the United States Court of Claims, and judgment was given

in favor of the claimant. On the 25th of March, 1879, the commissioners submitted request to the Secretary of War that the Attorney-General be asked to appeal the case to the United States Supreme Court. This was done, and the judgment of the Court of Claims was affirmed. By subsequent action the question has been submitted to Congress, and on the 30th of March, 1880, a bill was submitted to the Senate from the Committee on Military Affairs, to amend section 4820 of the Revised Statutes to agree with the original statute. The object in adverting to this matter is respectfully to urge that special prominence may be given to it in the report of the Secretary of War, with a view to obtain speedy and favorable action by Congress. The power for evil which the pension money has proved in the hands of inmates whose every want is abundantly supplied without it, has required a more strict enforcement of the regulations, and stronger measures of discipline than ever before needed.

In the month of June, 1880, the retirement of Brig. Gen. E. D. Townsend, Adjutant-General of the Army, carried him from the Board of Commissioners, and his successor, Brig. Gen. R. C. Drum became a member of the Board. General Townsend was one of the commissioners for more than eleven years, covering a period which has witnessed greater improvement in the Home than in all its previous history. In the work to accomplish this his attention was constant and earnest, giving the care to every detail which characterized him in all his official acts, besides manifesting the warmest personal interest in the comfort and happiness of every inmate of the Home.

No changes have occurred in the roster of officers of the Home. Their duties have been satisfactorily performed, and it is proper to say there are no duties to which an officer can be assigned more exacting than those which require daily attention to the wants and management of several hundred men, who have comparatively little to occupy their time or minds, and no care in obtaining means for their temporal necessities. The care of the sick and infirm, where all are more or less affected physically by old age and long service, or by wounds or disease, is especially great, and it has been faithfully and fully met.

The record of inmates shows the following changes:

Receiving the benefits, September 30, 1879.....	569
Admitted, regular, 122; temporary, 40; total.....	162
Readmitted .....	54
	— 785
Dropped by withdrawal, absence without leave, &c., regular, 158; temporary, 25; total.....	183
Dismissed, regular, 17; temporary, 1; total.....	18
Died, regular, 33; temporary, 1; total .....	34
	— 235
Receiving the benefits September 30, 1880.....	550

I have the honor to be, sir, very respectfully, your obedient servant,  
J. K. BARNES,  
*Surgeon-General U. S. A.,  
President of the Board of Commissioners.*

To the honorable the SECRETARY OF WAR..

## REPORT ON THE STATE, WAR, AND NAVY DEPARTMENT BUILDING.

OFFICE OF BUILDING FOR STATE, WAR,  
AND NAVY DEPARTMENTS, OLD BUILDING,  
NAVY DEPARTMENT, SEVENTEENTH STREET,  
Washington, D. C., July 1, 1880.

SIR: I have the honor to submit the following report of operations pertaining to the construction of the building for State, War, and Navy Departments, in my charge, for the fiscal year ending June 30, 1880.

During the year operations were confined to the east and north wings. At the close of the last fiscal year the east wing had been nearly completed and was occupied by the War and Navy Departments, while the work of preparing the foundation for the north wing had fairly commenced.

The condition of both wings at that time was fully stated in my annual report for that year.

### EAST WING, OR NEW NAVY DEPARTMENT.

During the month of July, 1879, a substantial asphaltum pavement with hydraulic concrete base was laid in the court-yard in rear of this wing; brass guard rails were placed upon the platforms at the driveway entrances to the basement corridor, and the mahogany and bronze railings of the main stairways were finally completed. There then remained only the interior finish and decoration of the library, so called, to be accomplished before this wing could be said to be fully completed.

During the year, however, there were supplied to the building, at the instance of the departments occupying it, 126 screen doors in the corridor doorways and a weather door and vestibule at the main entrance.

Work was steadily and continually pushed upon the library with the expectation of completing it in January, but owing to numerous delays by the contractors for the iron-work and the failure of one of them, and also to unavoidable delay in procuring the bronze ornaments for the corner panels, the library was not finally completed until Saturday, April 3.

On the following Monday, April 5, 1880, it was turned over to the honorable the Secretary of the Navy.

It was during the construction of this wing that the charge of the work was transferred to the War Department, March 3, 1875. At that date there had been expended on the east wing the sum of \$923,326.28. Since that date, to complete the wing the amount expended is \$1,748,961.15, making the total cost of the east wing \$2,672,287.43.

The total cost of the south wing was \$3,373,939.35.

These figures are in both cases exclusive of the cost of furniture, which is not provided by this office, but they include the cost of all permanent fixtures for gas and water service, heating and ventilation, steam elevators, and exterior sidewalks and approaches complete.

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### NORTH WING. PART OF NEW WAR DEPARTMENT.

The deep excavation necessary for the foundation of this part of the building, which was in progress at the close of the last fiscal year, had been so far completed by the middle of July that the concrete founda-



tion for the court-yard coal vaults was then commenced. From that time the construction of the coal vaults, grading and paving of the court-yard, and the laying of concrete foundation for the building proper went on rapidly and without serious interruption until completed. The front area walls were built during the time to sustain the embankments, after which the stone and brick masonry of the subbasement was begun and continued steadily until the close of the season, December 19, 1879. At that date the masonry had been completed to the height of the first story floor, including most of the floor itself.

Nearly all the concrete of the foundation, amounting to some 2,700 cubic yards, was mixed by a machine in the most thorough manner and laid at the rate of about 185 cubic yards per day. It is composed of broken stone, beach pebbles, sand, and the best natural hydraulic cement.

The bed on which it rests is a nearly uniform stratum of hard clay.

The gas and water mains were laid into the building in December.

During the usual suspension of work upon masonry in the winter the three heavy derricks were raised two stories higher.

On the 1st of April, 1880, stone-setting was resumed, and the regular season's work was commenced with the hope that an appropriation would be immediately made by Congress to prevent the otherwise expected delay and suspension of the work in the middle of this working season.

During the first week in May most of the stone cornice of the first story and the floor beams of the second story were put in place, the brick backing and interior walls having been carried up to that height throughout.

At this point the material remaining on hand consisted mainly of the cut granite for the exterior walls of the next (second) story, with but few bricks and no ironwork for the backing and interior walls. No new appropriation having been made the funds had not only been inadequate for the seasonable purchase of the iron-work for this story, requiring some six weeks to manufacture, but they were then reduced so low as to be insufficient for building up more than a part of the second story stone-work. Accordingly about three-fifths of the working force was necessarily discharged by the 20th of May.

From that time the work proceeded very slowly and it was nearly suspended by the close of the fiscal year, at which time a small part of the stone-work of the second story remained to be built, the brick-arch flooring of that story being complete.

By act of Congress, approved June 16, 1880, the sum of \$450,000 was appropriated for the continuance of operations upon this wing.

Orders for the granite of the third story front and the third and fourth stories of the court-yard wall were given two days afterward, and the preparation of orders for the remainder of the granite and advertising for proposals for all the cast-iron columns and pilasters, wrought-iron floor-beams and girders, bricks, cement, sand, and small castings for masonry required to complete the stone and brick masonry of this wing, were immediately taken in hand with the expectation that all the contracts would be signed in course of three weeks.

\* \* \* \* \*

After due advertisement, there was sold at public auction on December 10, 1879, on the premises of the building, a quantity of refuse building material which had accumulated from tearing down the old building of the War Department, a quantity of scrap, cast, and wrought iron, and also a large number of tools and implements brought from

the stone-cutting yards at Vinalhaven, Me., where they had been supplied by the United States under the previous so-called 15 per cent. contract for obtaining cut granite for this building, and had become of no further use. The amount of money realized from this sale was \$3,820,51, which was turned into the Treasury.

#### PROBABLE OPERATION DURING THE FISCAL YEAR 1880-'81.

It is intended to build nine short partition walls in the second story immediately, but with the exception of this small piece of work nothing can be done upon the building before September 15 next at the earliest, as so much time will necessarily be occupied in procuring cast and wrought iron work and cut granite. Other materials needed, such as bricks, cement, and sand, will be much sooner obtained, but they cannot be used without the other material to be combined with them.

After operations can be once resumed in the early fall, it is expected that they will not be again interrupted before the close of the fiscal year, at which time the roof will be finished.

No operations in the interior of the building or upon the approaches can be carried on simultaneously with the work above mentioned for want of a sufficient appropriation, and these things must therefore await further appropriations.

#### STATEMENT OF FUNDS—NORTH WING.

Total amount expended to date.....	\$975,074 21
Balance of appropriation on hand, including appropriation of \$450,000 just made.....	452,906 39
New appropriation ask for fiscal year ending June 30, 1882.....	450,000 00

THOS. LINCOLN CASEY,  
*Lieutenant-Colonel, Corps of Engineers, in charge.*

Hon. ALEXANDER RAMSEY,  
*Secretary of War.*

#### PUBLICATION OF WAR RECORDS.

WAR DEPARTMENT,  
*Washington, D. C., September 30, 1880.*

SIR: As the officer in charge, under your immediate direction, of the publication of the Official Records of the War of the Rebellion, as well as of the preliminary preparations therefor, I have the honor to state that the work has steadily progressed since my report of September 1, 1879.

Important additions have been made by voluntary contributions to the records, both Union and Confederate. Many documents that had been retained by Union commanders of high rank, and which were not duplicated in the files of the War Department, have been secured; and through the agency of General Wright, especially employed for that purpose, valuable papers are being constantly received from the ex-Confederate officials. Mr. Davis, Generals Beauregard, Chalmers, D. H. Hill, B. R. Johnson, S. D. Lee, E. Kirby Smith, Steele, and A. P. Stewart, and the representatives of Generals Branch, Breckinridge, D. H. Cooper, and Ewell are among the contributors not mentioned in former reports.

Congress having at its last session made an appropriation for "the printing and binding, under direction of the Secretary of War, of 10,000 copies of a compilation of the Official Records (Union and Confederate), of the War of the Rebellion, so far as the same may be ready for publication during the fiscal year," the first two volumes were sent to the Public Printer on the 24th of August last; and other volumes will follow until the appropriation is exhausted. The work of publication is progressing as rapidly as the proofs can be revised in my office, where special care is taken to secure the utmost possible accuracy in the text. Such accuracy is obviously of greater importance than rapid publication.

This compilation will be the first general publication of the military records of the late war; it is to embrace all official documents that can be obtained by the compiler, and that appear to be of any historical value; and, owing to the great number of documents relating to events contemporaneous in the several areas of active military operations, and to the general conduct of the war, it has been found necessary to adopt the plan of publication in *series*, as follows:

The first series will embrace the formal reports, both Union and Confederate, of the first seizures of United States property in the Southern States, and of military operations in the field, with the correspondence, orders, and returns relating specially thereto, and, as proposed, is to be accompanied by an Atlas. In this series the reports of all events will be arranged according to the campaigns and several theaters of operations (in chronological order), and the Union reports of any event will be immediately followed by the Confederate accounts. The correspondence, &c., not embraced in the "reports" proper, will follow (first Union and next Confederate) in chronological order. The volumes now in the hands of the Public Printer are of this series, and I hope to have them published (the first at least) by the reassembling of Congress. This series will be that most sought for by the public; and, according to present estimates, it will embrace about eighty volumes.

The second series will contain the correspondence, orders, reports, and returns, Union and Confederate, relating to prisoners of war, and (so far as the military authorities were concerned) to State or political prisoners. It is not proposed to publish any of this series till the records for 1863 have been examined; this series will probably not exceed four volumes.

The third series will contain the correspondence, orders, reports, and returns of the Union authorities (embracing their correspondence with the Confederate officials) and not relating specially to the subjects of the first and second series; this will set forth the annual and special reports of the Secretary of War, the General-in-Chief, and the chiefs of the several staff corps and departments, the calls for troops, and the correspondence between the National and the several State authorities. Volume I, covering 1860-'61, is now ready for publication; the whole series will probably reach eight volumes.

The fourth series will exhibit the correspondence, orders, reports, and returns of the Confederate authorities, similar to that indicated for the Union officials, as of the third series, and with the exception therein indicated. Volume I, covering the year 1861, is now ready for publication. The whole series will probably not exceed four volumes.

In my judgment the record should not be printed more rapidly in the coming fiscal year than is indicated by the appropriations asked for that purpose. Should it be decided otherwise, an increase in, and a reorganization of, the clerical force employed, and additional office room will be absolutely necessary.

Under date of July 3 last, the legal representatives of the late Confederate Generals Bragg and Polk were advised of that provision of the act of June 16 last, by which "the Secretary of War is authorized to negotiate" with them for the purchase of the "private papers" of those officers relating to the late war. The correspondence resulting from such notification is yet open, and will be submitted hereafter in a special report.

I desire again to express my obligations for the special, zealous, and efficient assistance rendered to me by Messrs. J. W. Kirkley, of the Adjutant-General's Office, and A. P. Tasker, of the Archive Office. They certainly deserve extra compensation for the extra labor performed in connection with the work intrusted to me.

Very respectfully, your obedient servant,

ROBERT N. SCOTT,  
*Brevet Lieutenant-Colonel, U. S. Army.*

The SECRETARY OF WAR.

# REPORT

## OF THE

# SECRETARY OF THE NAVY.

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WASHINGTON CITY, D. C.,  
NAVY DEPARTMENT, *November 30, 1880.*

SIR: I have the honor to lay before you the regular annual report of the Navy Department, showing its condition and operations for the fiscal year ending June 30, 1880. It embraces the current expenditures for that year, and also the estimates for the ensuing fiscal year ending June 30, 1882.

### SQUADRONS.

**THE EUROPEAN SQUADRON.**—Rear-Admiral John C. Howell remains in command. The following vessels compose the squadron: Trenton (flag-ship), Quinnebaug, Wyoming, and Nipsic. The Alliance and Enterprise have returned to the United States on account of the expiration of their cruises.

The vessels of this squadron have been actively engaged during the year in visiting the principal ports upon the Mediterranean. The Trenton, in consequence of the unsettled condition of affairs in Turkey, made an effort to reach Constantinople, but was unable to do so. The Enterprise, Wyoming, and Nipsic, however, have visited that point, with the view of furnishing such protection as might be found necessary to the persons and property of American citizens sojourning in that neighborhood. The Nipsic is still stationed there for this purpose.

**THE ASIATIC SQUADRON.**—Rear-Admiral John M. B. Clitz now commands this squadron, Rear-Admiral Thomas H. Patterson having been detached September 11, 1880, on the expiration of his term. The following vessels constitute the force: Richmond (flag-ship), Swatara, Ashuelot, Monocacy, Alert, and Palos. Since the last annual report the Ranger has been ordered to the Mare Island navy-yard, and the Swatara and Alert have been added to the squadron.

The duties performed by this squadron during the year have been of an important and most delicate nature, owing to the threatening condition of the relations between Russia and China. But they have been discharged in a manner highly satisfactory to the department.

**THE NORTH ATLANTIC SQUADRON.**—Rear-Admiral R. H. Wyman



is still in command. The squadron consists of the following vessels: Tennessee (flag-ship), Powhatan, Vandalia, Galena, Kearsarge, Alliance, and Yantic. It may soon become necessary, however, to send one of these to the Mediterranean to take the place of the Alliance.

The iron-clad monitors Ajax, Catskill, Lehigh, Mahopac, and Manhattan (in partial commission at Brandon on the James River, in Virginia), and the Montauk, Wyandotte, and Passaic (the last named being used as a receiving-ship at the Washington navy-yard) are also attached to this squadron. The New Hampshire and Pawnee are in service at Port Royal, S. C., the latter as a store-ship.

Since the last report there have been the following changes in this squadron: The Tennessee commissioned as the flag-ship, Marion ordered to the South Atlantic squadron, Nipsic ordered to the Mediterranean, and the Galena, Alliance, and Yantic have been added.

**SOUTH ATLANTIC SQUADRON.**—Rear-Admiral Andrew Bryson arrived at Rio de Janeiro, Brazil, December 1, 1879, with the Shenandoah, and took command, relieving Rear-Admiral E. T. Nichols, whose term had expired. The vessels at present are the Shenandoah (flag-ship) and Marion. The last-named vessel was detained at Montevideo, when *en route* to join the Pacific squadron, on account of the appearance of the yellow fever aboard, and has been since attached to the station in place of the Wachusett, which has been detached and sent to the Pacific station.

**THE PACIFIC SQUADRON.**—Rear-Admiral C. R. P. Rodgers was, at his own request, relieved of the command October 1, 1880, and Rear-Admiral Thomas H. Stevens took command on that date. The vessels are as follows: Pensacola (flag-ship), Alaska, Lackawanna, Wachusett, Adams, and the store-ship Onward stationed at Callao, on the coast of Peru. The Wachusett has been added since the last report.

**SPECIAL SERVICE.**—The Jamestown remains at Sitka, in Alaska, where she was sent in May, 1879, in consequence of the disturbed condition of affairs, which threatened not only the destruction of property, but bloodshed. She has remained there ever since, and besides the success of her officers in preserving the peace and furnishing security to persons and property, they have rendered valuable service in surveying the waters and bays adjacent to Sitka. They have been unable to extend these surveys as far as they consider desirable, because of the fact that the Jamestown is a sailing-vessel, and not a steamer, whereby she is prevented from entering the rivers and inner bays. If Congress shall decline to adopt the suggestion heretofore made by this department, and renewed in this report, to establish some sort of territorial organization over Alaska, it may become necessary, by the ensuing spring, to withdraw the Jamestown and supply her place with a suitable steam-vessel, so that the surveys may be continued.

The Constellation was dispatched across the Atlantic March 27, 1880, with provisions for the starving people of Ireland, and returned on

the 11th of June. The satisfactory manner in which this mission of national and individual benevolence was discharged, and the expressions of gratitude on the part of the recipients were communicated to Congress at its last session.

The Rio Bravo, stationed for several years at Brownsville, on the Rio Grande River, Texas, having become utterly worthless for naval purposes, and it being impossible, on account of her decayed condition, to bring her across the Gulf of Mexico, has been transferred to the War Department, and the expense of maintaining her at that remote point has been thereby saved to the Navy Department.

The Ticonderoga, flag-ship of Commodore R. W. Shufeldt, has just reached the Mare Island navy-yard, California, on her return from the special commercial and exploring expedition upon which she sailed in December, 1878. She needs a few repairs, after so long and hazardous a voyage, and when these are made she will be again ready for sea.

**TRAINING-SHIPS.**—The Minnesota, Constitution, Saratoga, and Portsmouth have made cruises with apprentice boys. The Michigan has also been employed in this service upon the Northern Lakes.

**PRACTICE-SHIPS.**—The Constellation and Dale made the usual summer cruise with cadet-midshipmen, and the Despatch and Standish with cadet-engineer.

The Tallapoosa has continued to make her usual trips with freight for the several navy-yards.

The torpedo vessels Intrepid and Alarm remain at the New York navy-yard. The experiments with the engine of the latter, authorized under a special appropriation by Congress, furnish reasonable ground of belief that they will prove successful.

The Saint Mary's continues in use by the State of New York as a marine school-ship.

**SURVEYING DUTY.**—The Tuscarora was engaged in surveying on the west coast of Mexico until March, 1880, and was put out of commission for repair May 31, 1880. The Ranger is now being fitted out at the Mare Island navy-yard for that service.

**SHIPS UNDERGOING REPAIR.**—The following ships are undergoing repairs: Lancaster, at the Kittery yard; Hartford, at Boston; Brooklyn, at Brooklyn; Juniata and Essex, at League Island; Enterprise, at Washington City; Tuscarora, Iroquois, and Ranger, at Mare Island. The Canandaigua is undergoing examination with the view of her being repaired at Norfolk if it shall be decided that it can be done advantageously.

**SHIPS PROBABLY WORTH REPAIRING.**—Plymouth, laid up on account of the yellow fever appearing twice upon her when at sea; Omaha, Guard, Ossipee, and New York.

**RECEIVING-SHIPS.**—Wabash, at Boston; Vermont and Colorado, at Brooklyn; Saint Louis, at League Island; Passaic, monitor, at Washington City; Franklin, at Norfolk; and Independence, at Mare Island.

EXPENDITURES.

The amount of appropriations applicable to the current expenses of the fiscal year ending June 30, 1880, was stated in my last annual report to be \$14,502,250.67. Of this sum, \$232,265.72 is properly chargeable to deficiencies for previous years, to specific appropriations for small stores, a new propeller for the torpedo vessel Alarm, and for the support of the Naval Asylum as explained in my last report. This sum should, consequently, be deducted. And the sum of \$236.25 should be added to the amount thus produced, inasmuch as it was subsequently appropriated for the Naval Observatory. This reduces the sum to \$14,270,221.20. There was also a balance on hand at the beginning of the year, of \$436,421.09, on account of pay of the Navy, pay of Marine Corps, and general account of advances. The total gross amount, therefore, which was available for the year was \$14,706,642.29, subject to a deduction by surplus-fund warrant of \$1,998.07, which leaves the net amount \$14,704,644.22.

The expenditures were \$12,916,639.45; leaving a balance unexpended at the end of the year of \$1,788,004.77. To this, however, should be added the net amount unexpended in the hands of pay officers, as shown at the office of the Fourth Auditor, \$353,677.46, which shows that the net expenditures for the fiscal year were \$2,141,682.23 less than the amount applicable therefor.

Exhibit of expenditure chargeable to Navy appropriations.

Date.	Drawn.	Refunded.	Expended.
APPROPRIATIONS FOR 1879-'80.			
1879.			
July .....	\$1, 176, 599 41	\$16, 816 89	\$1, 165, 782 52
August .....	1, 421, 309 72	480, 319 89	940, 989 83
September .....	1, 749, 604 31	241, 676 62	1, 507, 927 71
October .....	1, 422, 890 64	362, 626 93	1, 060, 263 73
November .....	1, 314, 430 19	181, 079 70	1, 133, 350 49
December .....	1, 996, 822 41	923, 394 87	1, 073, 427 56
1880.			
January .....	1, 550, 744 42	246, 545 23	1, 313, 199 19
February .....	1, 706, 903 45	774, 691 26	932, 212 19
March .....	1, 370, 048 97	200, 467 77	1, 169, 581 20
April .....	1, 987, 738 77	1, 034, 298 59	953, 440 18
May .....	1, 244, 684 62	205, 577 51	1, 039, 107 11
June .....	1, 611, 783 52	984, 515 77	627, 267 75
Total .....	18, 562, 650 48	5, 646, 011 93	12, 916, 639 45
APPROPRIATIONS FOR 1880-'81.			
1880.			
July .....	1, 582, 399 33	682 16	1, 581, 717 17
August .....	1, 641, 265 34	775, 961 46	865, 303 88
September .....	1, 582, 315 70	1, 980 04	1, 580, 335 66
October .....	1, 014, 273 74	60 00	1, 014, 213 74
Total .....	5, 820, 254 11	778, 683 00	5, 041, 570 45
1879.			
July 22. Appropriation warrant No. 326 .....			\$13, 862, 459 95
Appropriation warrant No. 327 .....			407, 525 00
1880.			
June 12. Appropriation warrant No. 331 .....			236 25
			14, 270, 221 20

## NAVY PENSION FUND.

The following statement shows the number and yearly amount of pensions on the rolls June 30, 1880, and the amount paid during the fiscal year:

	On roll June 30, 1880.	Yearly value.	Amount paid for pensions.
Navy invalids .....	2,060	\$247,232 18	\$352,101 18
Navy widows and others .....	1,870	318,880 00	400,679 79
Total .....	3,930	566,112 18	752,771 97

## ESTIMATES FOR THE FISCAL YEAR ENDING JUNE 30, 1882.

Pay of the Navy .....	\$7,565,375 00
Pay of civil establishment, navy-yards .....	196,611 50
Ordnance and torpedo corps .....	291,125 00
Coal, hemp, and equipment .....	896,000 00
Navigation and navigation supplies .....	130,500 00
Hydrographic work .....	75,000 00
Naval Observatory, Nautical Almanac .....	54,536 25
Repairs and preservation of vessels .....	1,500,000 00
Steam machinery, tools, &c .....	1,000,000 00
Provisions for the Navy .....	1,200,000 00
Repairs of hospitals and laboratories .....	30,000 00
Medical Department .....	45,000 00
Naval Hospital fund .....	50,000 00
Contingent expenses of department and bureaus .....	263,850 00
Naval Academy .....	187,744 00
Support of Marine Corps .....	1,026,775 81
Naval Asylum, Philadelphia .....	59,813 00
Maintenance of yards and docks .....	450,000 00
Repairs and improvements of navy-yards .....	874,321 06
Surgeon's house, &c., Mare Island .....	28,500 00
	15,925,151 61
Add amount estimated for new buildings at Naval Academy .....	28,600 00
	15,953,751 61

The amount of appropriations available for the operations of the present fiscal year ending June 30, 1881, is \$15,035,752.45, to which should be added \$59,309 transferred from the navy pension fund to the naval asylum, making a total of \$15,095,061.45. The amount drawn by warrant from the Treasury from July 1, 1880, to November 1, 1880, is \$5,041,570.45, which exceeds the sum drawn during the same period of last year \$366,606.66.

The estimates for the fiscal year ending June 30, 1882, for current expenses are \$15,925,151.61, exclusive of an estimate of \$28,600 for new buildings at the Naval Academy, recommended by the Board of Visitors, which, added to the foregoing, makes a total of \$15,953,751.61.

I have referred, in previous reports, to the difficulties attending the

disbursement of pay of the Navy, when the attempt was made by act of Congress to separate that fund, making it an annual appropriation subject to the restrictions of the law regulating, by yearly limitation, all the appropriations of the government. Complications which attended the expenditure of this special fund, although of a somewhat different character, I find to extend, in a greater or less degree, over all the disbursements connected with the floating portion of the Navy, that arm of the service which reaches over all the seas of the world, by means of vessels whose cruises are for one, two, and three years' duration. Formerly it was thought impossible, apparently, to control expenditures abroad. Balances of appropriations lapped, were continuous, and were made use of year after year. There was no money settlement until the accounts of paymasters were completed and rendered at the expiration of a cruise. More recently, however, accounts have been forwarded quarterly, while at present monthly money accounts are sent in to the Treasury Department for adjustment. Estimates never covered, or could cover, the accidents and necessities of the floating service accurately, and expenditures have been in a measure and unavoidably beyond the control of the Secretary of the Navy.

At the home stations and at the navy-yards all payments of money are originated at and directed from the department. Labor and materials are furnished upon requisitions submitted, and calculations based upon the amount provided by law to the credit of particular appropriations. No expenditures are allowed until bills therefor are approved, and no contracts are entered into unless it is first shown that there are sufficient funds to cover the indebtedness. Thus expenditures are controlled and operations are cut off when the appropriations are exhausted before the close of the fiscal year involved. But abroad the case is otherwise. The exigencies and demands of vessels afloat, which are in constant motion from one country to another, or from a fleet in one part of the world to a fleet in far distant waters, render it impracticable and impossible to pursue the same course with regard to the payment of liabilities contracted and the purchase of supplies. If a ship is short of coal when under orders in a foreign port, her commanding officer can neither send home to the stores of fuel for his supply, nor wait for a money requisition on the department from the appropriation liable for the expenditure, nor hold his vessel at anchor until he could communicate with the department, in order to ascertain the state of the appropriation from which the coal has to be bought. If provisions or small stores are condemned as unfit for use and are thrown overboard, fresh supplies must be furnished at once—the men must have their daily rations of meat and tobacco. If a gale carries off a spar, or an engine breaks down, repairs must be made at the time of the accident, and new materials must be procured. Pilotage must always be provided and paid for, without reference to how much that expense may have already amounted to during the year. No thought or provision can



possibly be arranged in anticipation of any delays of this description. These examples illustrate numberless and almost unbounded contingencies which continually arise in all the departments of the floating Navy.

I have endeavored to guard against these contingent expenses rigidly, and have succeeded better than I had reason to expect. But it is not, however, within the power of the department to keep an absolutely strict current cash account without legislation covering the wants and defects I have enumerated. It is perfectly manifest that while the Secretary of the Navy is held accountable for the limited expenditure of his appropriations, there are transactions frequently occurring which he is called on to approve or sanction after they have been performed, and which he did not first authorize and could not possibly have anticipated. These contingencies have always produced, and, to a limited extent, continue to produce, unavoidable liabilities against some particular appropriations, without, however, increasing the net expenditure or modifying the aggregate sum placed to the credit of the Navy Department. In process of a long time I am convinced that by this means surplus balances would become deranged and deficient.

I invite the attention of Congress, therefore, to the consideration of this important subject, and recommend the enactment of such laws as will enable the Secretary of the Navy, through the disbursing officers of floating vessels, to draw upon a common fund for extraordinary expenses for loss or waste, and those in excess of the allowance to each ship, as established by law and regulations, to be made up by one title, and consisting of some certain percentage or proportion of all the appropriations for any given fiscal year. Through similar means, and at my request, pay of the Navy was relieved of its embarrassment, and is particularly defined by the opening of a "pay miscellaneous" appropriation, as also was the "small stores" fund. The reasons therefor were suggested in my annual report for 1878. It is proper, however, that I should say, in this connection, that the accounts of the Navy Department were never in better condition than at the present time.

#### BUREAUS.

The reports of the chiefs of the several bureaus show, in detail, their operations during the last fiscal year. These have been confined to matters pertaining to the ordinary current service, such as were absolutely necessary. Where provisions, coal, materials, etc., have been purchased, they have not all been consumed within the year, but the balance of these supplies remaining on hand on June 30 necessarily pass over into the present year. This fact shows that it is impossible to strike a precise balance at the end of any year of expenses chargeable to that year. As the work is continuing, and the supplies and materials remain on hand, the accounts of disbursement are made up so as to show the extent of purchases within the current year, which are always

subject, of course, to variation to the extent of the amount on hand at the beginning of a new year. But, as the amount of this variation, whatever it is, goes over into the new year and is then accounted for, it makes no difference in the expenditures of the department for any series of years.

#### ORDNANCE.

The report of the bureau sets forth the necessity of procuring guns of the latest and most approved system. Such guns on hand as have been converted into breech-loaders have been greatly increased in efficiency; but the recent experiments in Europe have demonstrated the necessity of supplying our Navy with guns of the most approved modern pattern and greatest capacity. At the same time it is not considered advisable to make large expenditures with a view to the armament upon our vessels-of-war until it shall be decided what is to be their future type. Our delay thus far has worked no injury, but probably an advantage, as we are now in a condition to avail ourselves of the experiments made by others. The Hotchkiss revolving guns have been introduced into several of our vessels, being regarded as the most reliable method of defense against torpedo-boats. Their projectiles will penetrate any of these at a distance of one thousand yards, at an acute angle. With an increased caliber they will penetrate the sides of most of the trans-Atlantic steamers. The Hotchkiss repeating rifle has also been introduced, and these, together with the Remington-Keene and the Lee guns, are considered sufficient for all experimental purposes in settling the relative value of the several systems.

#### EQUIPMENT AND RECRUITING.

During the year seventy-five vessels have been wholly or partially equipped. At home and abroad 43,713 tons of coal have been purchased. Of hemp there have been purchased 155,785 pounds of Russia, 280,260 of Manilla, and 112,075 of American, a total of 548,120 pounds. There have been 500,000 pounds of iron rolled by the rolling-mill at the Washington City yard, all of superior quality, excelling that purchased. The forge and anchor shop has been constantly turning out anchors, gun-tubes, and shafts for engines. Experiments have been made with ingot of "low steel," which promise economical results in utilizing the large quantities of scrap metal on hand. The experiments of welding by compression have been continued in the smith and chain shop, and will be persevered in until satisfactory results are reached. The galley shop is constantly at work, and the improvements made from time to time have enabled the department to produce the most perfect galley now in use.

At the close of the fiscal year there were 7,322 men and boys in the service. There were 5,272 enlistments during the year to fill the places of those whose terms of service had expired. Reports from ships in commission show a marked improvement in the morale of our seamen.

Of the total number enlisted 696 are employed at the Naval Academy on vessels engaged in the coast survey and fish commission, thus reducing the effective force of the Navy proper to only 6,626 men and boys. There would seem to be no doubt of the propriety of providing that the men engaged in these special services should be chargeable to them alone, and not taken from the body of seamen enlisted for service in the Navy.

#### NAVIGATION.

The report of the Chief of the Bureau of Navigation shows the successful and economical management of the important branch of the naval service under his control. The revision of the American Practical Navigator, an epitome of navigation and nautical astronomy, has been completed, and the manuscript is now ready for the printer. Preliminary arrangements have been made for determining, by the aid of the telegraph, the longitude of a number of points in Asia during the next spring.

The efforts of this bureau to improve the means of navigating the high seas by surveying and sounding have been as successful as the limited means and the present naval establishment have permitted, and the officers to whom occasional surveys have been intrusted have carried out their instructions with intelligence and zeal. The completion of the survey of the west coast of Mexico, and a more systematic examination of reported dangers in the Atlantic and Pacific Oceans, and of the many islands in the latter, with a view to ascertain their harbor facilities, are urgently recommended. These important and necessary objects cannot be satisfactorily accomplished unless Congress shall furnish the means therefor. The omission to supply these would leave much of the best talents of our naval officers unemployed, except in the ordinary cruising service and upon shore duty, and would, besides, deprive navigators of much information necessary to the safety of vessels at sea. And it should not be overlooked that the information obtained by these surveys is more important to the mercantile marine than to ships of war, and that there is no other mode in which it can be satisfactorily procured. We educate our naval officers for the purpose, and there is no other body of men to whom this necessary work can be intrusted. Unscientific navigators may sometimes discover the hidden dangers of the sea when it is impossible to protect themselves against them, but when they do so they are unable to determine with sufficient accuracy their latitude and longitude, and have no facilities for marking them upon charts. All this can be done by our naval officers, and the valuable services they have thus far performed in charting the oceans are known and appreciated by the world.

The Hydrographic Office is the only source from which the mariners of this country are supplied with trustworthy charts of all parts of the globe, and its usefulness is steadily increasing by the publication of additional charts, sailing directions, and other aids to navigation. To pro-

mote the objects of this office as fully as they deserve the appropriations therefor should be somewhat more liberally granted, and in view of the peculiar nature of the work performed it is recommended that they be not restricted to any one fiscal year, but be made continuous—the necessity for which arises out of the fact that the expenditures are mainly made at sea, and it is not always possible to ascertain the precise amount expended and the balances on hand at the close of any fiscal year.

The Superintendent of the Naval Observatory reports the astronomical observations performed during the year, the experiments made in astronomical photography, the condition of the work of the eclipses of 1878 and 1880, the treatment of naval chronometers, and the manner of furnishing actual time-signals throughout the country. These transactions serve to show that the Observatory has forfeited no portion of its claim to eminent distinction, and that it is entitled to the fostering care of the government. I cannot refrain from repeating the recommendation heretofore made by me that a new site for the institution be purchased. I have no information of the causes which have led to the failure to make this purchase as authorized by Congress, but the necessity for it is so apparent that there should be no delay beyond the present winter.

The preparation of the American Ephemeris and Nautical Almanac for years in advance, and of improved tables of the positions and motions of the stars and planets, is in a satisfactory state of progress, and some very interesting experiments have been made during the past year for determining the velocity of light. Those engaged in these branches of scientific investigation have exhibited a degree of proficiency which places them in the front rank among scientists, and the important work in which they are engaged commends itself to the consideration of Congress and demands the most liberal appropriations.

I called the attention of Congress, in my last annual report, to some practical difficulties in the administration of the law which prescribes rules for the navigation of the sea, with the view of securing unanimity by international arrangements between the United States and other governments. The matter was entered upon at the last session, but no conclusion was reached. It is desirable that definite action shall be had without further delay, inasmuch as it is important that all who navigate the ocean shall be required to conform to some uniform system of rules, in order that collisions may be prevented. The amended regulations for this purpose which were proposed by the British Government and adopted by all maritime nations except the United States, should be made statutory by act of Congress, in order to guard the ship-owners of this country against complications and pecuniary loss from the non-observance of them in cases of collisions in foreign waters.

The Chief Signal Officer of the Navy submits a report of the operations of his office during the year. One of the chief objects to which attention has been given was the collection and arrangement of data

with regard to regulations for preventing collisions at sea. This has resulted in the issue of a general order from the department on that subject, and will enable our naval vessels on the high seas to act harmoniously with those of other nations, so far as steering and light regulations are concerned. The office has also been engaged in examining the different methods of fog-signals and various appliances for steam-whistling. Some uniform system of fog-course signals is highly essential to safe navigation, and the suggestions presented shall receive the earnest attention of the department, and such legislation as may be deemed advisable will be recommended. The introduction of electric lights on our war vessels, the better instruction of our seamen in code-signaling, the extension of the system of night-signals adopted in the Navy and its application to the general signal-book, are important subjects discussed and advocated by the chief signal officers.

#### YARDS AND DOCKS.

Exclusive of \$75,000 appropriated for the stone dry-dock at the Mare Island yard, the only appropriations made for the several navy-yards were those designed to cover the ordinary annual expenditures necessary to keep them in repair, and to preserve them from dilapidation as far as possible. These general appropriations are made for "repairs and preservation," "general maintenance," and "contingencies," and have been expended as judiciously and economically as possible. The work of this kind done at all the yards is of nearly the same character each year—the last year not differing in any material respect from the year preceding. Proper care and attention has been bestowed upon the various and numerous buildings, docks, wharves, roads, fences, walks, etc., and where necessary such repairs have been made as the extent of the funds allotted would permit. The report of the Chief of the Bureau of Yards and Docks shows that all the yards present a marked improvement in appearance, and that proper attention has been paid to their grading, sewerage, and paving. The beneficial effect is seen in the improvement of the health of the residents and employés. The estimates for repairs for the next fiscal year are made upon the basis of the past few years, contemplating their preservation and indispensable repairs; that is, for the ordinary expenditures for these purposes. But if it is the intention of Congress that the yards shall be improved to the extent their importance demands, additional appropriations are suggested for the consideration of Congress. The amount annually required for preservation is insufficient to meet the demands upon it, and at the same time keep the large number of buildings, docks, wharves, and other works in a proper state of efficiency. Many of the large buildings are suffering for the want of repairs, and in order to keep them from serious injury the bureau is frequently compelled to make merely temporary and partial repairs. There are many frame



buildings, erected during the war, which should be removed, inasmuch as they endanger much valuable property in their vicinity.

**KITTERY YARD.**—The estimates for this yard are for workshops and water-works, \$21,000. The former are much needed, as a large portion of the work has to be done in old and dilapidated buildings. Upon the island adjacent to the yard there are a number of springs which afford an abundant supply of excellent water. It is desired to insert additional water-pipes so as to distribute it through the yard.

**BOSTON YARD.**—The estimates are for water-pipes, paving and grading, dry-dock gate, and repairs of rope-walk, \$76,883.75. The pipes are in bad condition and the water is consequently wasted. They should be renewed in order to secure a sufficient supply. The roads need repairing, because, in their present condition, transportation is difficult and expensive. The dry-dock must be supplied with a new gate, or there is great danger that it will become entirely useless. The turning gates have been condemned, and the floating gate is now the only reliance. This has been in use forty-seven years, and is both decayed and dangerous. If, when a ship is in dock, it should fail, the consequences, in the opinion of the Bureau of Yards and Docks, would be dangerous both to life and property, besides depriving the department of the means of docking a vessel. The appropriation for the repair of the rope-walk is rendered necessary by the occurrence of a fire several months ago, which is believed to have been the work of an incendiary, although sufficient evidence to produce conviction has not yet been obtained. This is one of the finest rope-walks in this country, if not in the world, and is the only one owned by the department. Its repair, therefore, being a necessity, it has been done by money drawn from the annual allotment fund for the yard, at a cost of about \$25,000. As about \$5,000 of this fund was applicable to this use, the estimate is for \$20,000 only, which will restore the fund to its condition before the fire.

**BROOKLYN YARD.**—Estimate for repairs to cob dock and for dredging, \$70,000. This dock is in a very dilapidated condition, and unless it is repaired will be liable to very serious injury. Good economy requires that the work shall be done without further delay. It is an important part of the yard, and besides supporting the ordnance, affords convenient storage for boilers, timber, and other heavy articles, and supplies the only recreation ground for sailors. The channel through which vessels necessarily reach the yard has become so shallow that the approach of those of moderate size has become difficult and somewhat hazardous. The obstacles can be easily removed by timely dredging, but if this is delayed much longer the injury may become irreparable except at a very heavy expense.

**LEAGUE ISLAND YARD.**—Estimate for dredging and filling in, improvement of dikes, and stable for fire-engine horses, wagons, etc., \$85,000. There must be a considerable quantity of dredging and filling done in this yard before enough solid land can be obtained for necessary

accommodation. As it will require some years before this can be done to the desired extent, the sooner an appropriation is made for that special purpose the better. Even after the work is done it should be left unoccupied by buildings a sufficient length of time for it to become compact. There is an extensive line of dikes around the island, designed to keep it from overflowing. This requires constant attention and is subject to inroads by freshets from the Delaware River. The buildings are needed for the shelter of the cattle and horses that belong to the yard, for the preservation of the wagon and fire-engines which, without them, are exposed to the weather and liable to constant deterioration in value.

**WASHINGTON YARD.**—Estimate for purchase of land and dredging the channel of the river, \$32,604.70. In my last annual report I stated the necessity for the purchase of additional ground for the extension of the yard. The enlargement of its boundaries is very desirable. I also called attention to the necessity of dredging the channel of the east branch of the Potomac River. The loose earth washed in from the adjoining hills is fast filling up the channel, and if not removed the navigation will, in a short time, be so impeded that even light-draught ships will be unable to reach the yard. Within a few days of the present time the Portsmouth ran aground at the mouth of the east branch, and only succeeded in reaching the yard by the aid of a towing vessel. At ordinary tide it is almost impossible for any of our vessels to get up as high as the yard without such aid. If this work is done without further delay it is confidently believed that it will require no more than the present estimate; but if delayed much longer a larger appropriation will be necessary to secure access to the yard, which is far too valuable to be abandoned. Much important work is done here which cannot be done at any of the other yards, and as it is so near the Capital it is desirable that it should be maintained what it now is, a first-class yard. The dredging machine now owned by the department is sufficient to execute all the work, and it can all be done at but little other expense than the price of the labor.

**NORFOLK YARD.**—Estimate for water-works and cisterns, \$13,832.60. These are necessary to the efficiency of the yard. I have heretofore called the attention of Congress to the necessity of building timber sheds at this yard, as I consider them of great importance, in view of the fact that there is a large quantity of valuable timber exposed to the weather and consequently deteriorating in value every year. No estimate has been made for them, but the public interest undoubtedly requires that they should be constructed, and it is hoped that Congress will, in this respect, agree with the department.

**MARE ISLAND YARD.**—Estimate for dry-dock, completion of iron-plating shop, constructing and repairing roads and pavements, extension of timber shed, and repair of section of floating dock, \$250,000. It is very desirable that a liberal appropriation shall be made for continuing the work upon the dry-dock. When completed this structure will be equal

to any in the world, and it has progressed so far as to require that the remainder of the work shall be finished with as little delay as possible. About seven years ago the coffer-dam, which keeps the water of the Napa River from flowing into the excavation, was built, but as the excavation approaches the water its capacity for resistance is proportionately diminished. The action of the water upon it from the river-side also tends to the same result. Besides, the materials are perishable and beginning to decay. Consequently, as operations can not progress much farther in the direction of the river with safety, it is considered absolutely necessary that the appropriation asked for shall be made. Having made a personal inspection of it I am enabled to add my own opinion to that of the Chief of the Bureau of Yards and Docks. The work so far as executed is admirably well done, and not only the interest of the public service but economy requires that the remainder of it shall be expeditiously completed. The giving way of the coffer-dam could not fail to result in serious and possibly irreparable injury.

The iron-plating shop is nearly completed and requires only a small sum to finish it. The work necessary to be done is within the building—the building itself having been erected several years ago. Solid and substantial roads are a positive necessity at this yard, owing to the fact that the soil is of such a nature that in wet weather heavy loads are transported with great difficulty. If built of stone they would be cheaper in the end than if built out of any of the more perishable material found in that vicinity. The addition to the timber sheds is necessary for the protection of the valuable timber which is now exposed to the weather. Unless the floating dock is repaired it may become impossible to obtain access to the bottoms of vessels until the completion of the dry-dock. For all these reasons, I earnestly recommend the appropriations estimated for by the bureau.

I regard this yard as of very great importance. It is the only one upon the Pacific, and consequently may be considered as representing the department upon that side of the continent. Situated, as it is, on the Napa River, near the point of junction between it and the Sacramento, and about twenty-seven miles from the city of San Francisco, it is completely land-locked. The approach to it from the Golden Horn is protected on either side by hills, so that the land batteries already there—and such others as in case of necessity could be readily constructed—would easily prevent it from being reached by a hostile fleet. The climate is fine, and the place perfectly healthful. The buildings already there are well constructed, and everything connected with it combines to recommend it to the favorable consideration of Congress. For some time it has been feared that shoals were forming in the river, in front of the yard, which might injure permanently its navigation. It has been supposed that these were formed by deposits from the mines, brought down by the Sacramento River. But after a personal examination—as far as was in my power—I became convinced that these deposits did not

extend up so far as the yard, but that the shoaling thus far had been created by the washings from the agricultural valley of the Napa, which, being only soft mud, could be easily removed by dredging at a small expense. After causing a coal wharf which extended out into the water to be removed, and the piles drawn so that there shall be no break in the whole water front of the yard, I have provided for dredging the channel, and this done it is confidently believed that the water will remain of sufficient depth for all necessary purposes.

**PENSACOLA YARD.**—The special appropriation for this yard at the last session of Congress was \$150,000. This is being expended in the construction of a necessary timber-shed, in machinery for the Bureau of Yards and Docks, and in the construction of a caisson for the dry-dock, authorized to be built some years ago, and two sections of which are now there. When the other sections are completed, the dock will be ready for use. If, after all these improvements are made, there shall be any surplus of the appropriation unexpended, it will be used to extend the sea wall. This is a very important yard, being the only one upon the Gulf, and the public interests will be advanced by liberal appropriations to restore it to the condition it was in before the war.

**NEW LONDON YARD.**—The special appropriation for this yard at the last session was \$20,000. The law directed that it should be expended in adding a drill-room to a building already constructed, and for a hospital. The two objects have no immediate relation, and a hospital should be detached from a building used as a drill-room. Besides, the appropriation is, manifestly, too small for both. Consequently, I have ordered that the sum appropriated be used in constructing an addition to the building already erected, and suggest that, as there is no hospital at this yard, an appropriation be made for building one.

**KEY WEST STATION.**—The sum appropriated at the last session for this station was \$30,000, and is being expended in rebuilding the wharf, which was absolutely necessary.

#### MEDICINE AND SURGERY.

A detailed report of the sanitary condition of the Navy by the Surgeon-General is hereto appended. It will be seen that this has been made the subject of special and extensive investigation, and in comparison with foreign navies the results have proved eminently satisfactory. These have been secured, in great part, by the adoption of appropriate hygiene measures. One of the most important of these is the thorough ventilation of vessels by suitable apparatus, such as has been introduced on board the Richmond, and to which I called attention in my last report. This apparatus has been fully tested, and the results obtained are of the most gratifying character; so much so, indeed, that the department has decided to introduce the same system in the three large vessels—Lancaster, Brooklyn, and Hartford—now undergoing repair. There is no room to doubt that this innovation in the construction

of war-ships will add, not only to their healthiness, efficiency, and comfort, but also prevent the rapid decay of the timbers, which, as is well known, is, in great measure, superinduced by stagnant air and dampness.

Yellow fever has afflicted only one of our ships during the current year. It appeared on the Marion when on the coast of South America. The loss of life was slight, and since she was thoroughly disinfected there has not been, up to the present date, any recurrence of the disease. She is understood to be now in a healthful condition. The reception of this disease by a war-ship is a grave occurrence, not alone as entailing immediate loss of life, but because it has been found to be a matter of extreme difficulty to permanently clear the vessel of the infection so that the disease will not return under favorable circumstances without a new exposure. An interesting and important report upon this matter has been published by the department, under the supervision of the Bureau of Medicine and Surgery, to which attention is particularly called. It contains the results of some instructive experiments bearing upon the theory which attributes the origin of the disease to the presence of a germ, needing only heat and moisture as the exciting cause for the diffusion of its poison. The department has instituted scientific investigations to determine the best means of eradicating the infection with celerity and certainty, and it is hoped that success will crown these efforts.

The system of recruiting has been perfected as far as possible, so that now only thoroughly healthy persons are permitted to enter the naval service, inasmuch as rigid physical examinations are had in all cases, whether for cadets, seamen, or apprentices. This searching scrutiny is indispensable in determining the fitness of those who wish to assume the arduous and responsible duties of naval life. The safety of a vessel and crew may turn upon the accuracy of the powers of vision, and hence the importance of ascertaining the soundness of the eye, both as regards color, perception, and refraction. It is to be regretted that no uniform standards for such examinations exist among the various maritime nations, as seem to be demanded in the interest of the safe navigation of the seas. Some movement upon this important subject is desirable, and I recommend that Congress authorize the creation of a commission, under the national sanction, to determine these matters by scientific and uniform methods.

#### PROVISIONS AND CLOTHING.

The report of the Chief of the Bureau of Provisions and Clothing shows that during the last year the business of this bureau has been satisfactorily conducted, and with all practicable economy.

#### STEAM ENGINEERING.

The report of the Chief of the Bureau of Steam Engineering shows, in detail, the operations for the year. A large amount of work has been



done upon the machinery and boilers of twenty-six vessels, of all classes; new boilers for five vessels have been furnished, and several new screw propellers. The organization of this bureau is in good working condition, having in progress new engines, boilers, and propellers for vessels now undergoing repair at the several navy-yards.

#### CONSTRUCTION AND REPAIR.

Repairs have been made by the Bureau of Construction and Repair during the year upon forty-three vessels. Work of the same kind is now progressing at the different yards, which is fully set forth in the report of the chief of the bureau. Some of the work of this bureau has been done in foreign ports. Two of our ships in the Asiatic squadron having needed repairs, I deemed it expedient to send out one of our naval constructors, so that they could be made under his supervision, in preference to the expensive method of bringing the vessels to the Mare Island yard. One of them has been completed, and the other is now in hand. The experiment has turned out admirably well in an economic point of view, the expense being greatly diminished.

The two last-named bureaus have accompanied their reports with the estimated cost of completing the double-turreted monitors Terror, Puritan, Amphitrite, and Monadnoc, and turrets and pilot-house for the Miantonomoh. The Miantonomoh having been completed, except in these particulars, has been accepted, and is now in possession of the department. The other four remain at the yards of the contractors unfinished, and it is very desirable that Congress should direct their disposition. The contractors are undoubtedly subject to loss, which must be increased so long as they are on their hands, and the sooner they are finally disposed of the better both for them and the government.

#### MARINE CORPS.

The report of the Commandant of the Marine Corps represents the necessity of additional officers and men. The law under which the corps is organized provides for an ample number of both officers and privates, but the appropriation acts have failed to provide for their pay and employment. The present number of privates is 1,500, and provision has not been made for any more. At least 2,000 privates are required to fill the guards of vessels in commission and supply proper protection at the navy-yards and stations. That number is recommended and an estimate for their pay and subsistence is submitted. If the necessary appropriation shall be made, the corps will then be 500 less than the organic act authorizes, but will be sufficient for the present requirements of the service.

An estimate has also been submitted for fifteen additional second lieutenants, so as to restore the corps to its former strength, and to supply the necessary officers for duty ashore and afloat. The number will

not then be in excess of that which the act establishing the corps contemplates; and the number in that grade will be proportionate to those of the higher grades, which is very essential in any properly organized military corps. There is great need for these additional second lieutenants asked for, and I cannot refrain from expressing the hope that Congress will appropriate for them and thus sanction their appointment.

The duties of the Marine Corps are so varied, and the officers and men are disposed of in so many small detachments, that it is very important that each of such detachments should be strong enough to be efficient. At present very few vessels in commission have a proper complement of marines in their guards. At the navy-yards and stations the duty is performed as well as possible with the limited force allowed. It is well understood, by those connected with the service, that more men are needed to properly guard and protect the valuable public property necessarily committed to their charge.

Attention is specially called to the urgent need of suitable barracks and quarters at the Naval Academy at Annapolis, at Norfolk, and at Pensacola, and it is hoped that these wants may be speedily supplied by necessary appropriations for the purpose.

The Marine Corps, which is contemporaneous with our national existence, has been an efficient and valuable branch of the Navy. It has participated with the Navy in all its engagements, and always with credit. All maritime powers recognize the importance of a well organized force of marines, and their employment goes back to the earliest days of naval warfare. As our Navy is at present constituted, the marines on ship-board are a necessary and useful body of men. They assist in manning the batteries and in working ship, and are besides an essential and indispensable police force. The testimony of the highest and most experienced officers of the Navy is unanimous as to the usefulness of the Marine Corps, and they are in favor of maintaining it on a basis sufficient in number of officers and enlisted men to insure its thorough efficiency.

#### NAVAL ACADEMY.

It is very gratifying to be enabled to report an entirely satisfactory condition of affairs in the instructive, disciplinary, financial, and sanitary management of the Naval Academy—a condition creditable alike to the able and efficient superintendent, officers, and professors, and to the cadets themselves. The prescribed course of studies has been pursued during the academic year, and the practice-ships have made their usual summer cruises. The superintendent, Rear-Admiral G. B. Balch, in his annual report, states that the ships have been in a high state of discipline, and the officers, cadets, and crew contented and happy.

The report of the Board of Visitors shows that a full examination was made of the Academy in all its departments, and, also, of the examination-papers of the several classes of cadets. Concerning the method and course of instruction no change is recommended, although some val-

uable suggestions are made. As conducive to the perfection of the system of instruction pursued in the department of seamanship, gunnery, and navigation, the board recommend that specimen guns and carriages, now in use in the Navy, and which are not at present within reach of the instructors in great guns, be furnished, in order that the cadets may be instructed in their use. They also report that it would be a decided advantage if a steam war-ship, of moderate tonnage, could be placed at the disposal of the Academy and call attention to the want of proper models for instruction in the details of ship-building. These recommendations are worthy of consideration, and the department will endeavor to carry them out as far as practicable. In reference to the last, however, I call attention to what I said in my last annual report on the subject of forming a distinct class of cadet constructors. At present there is no such class, and, consequently, the details of ship-building are not taught to the desired extent, for the reason that this science does not necessarily pertain to either of the departments of professional study. If such a class were organized, then our ship constructors would be taken from it, and not from other classes educated for other professional pursuits. In this event there is no reason known why we may not, in a few years, have a corps of naval constructors fully equal to all the exigencies of the service.

In regard to discipline, the board reports than an examination of the demerit marks shows that, while it is administered strictly and without favoritism, it is enforced with equity and a just appreciation of the character of the offenders. They were much impressed with the mutual sympathy which exists between the instructors and those under their charge.

The sanitary condition of the Academy has been excellent. Three cadets have recently died, but their deaths were not due to any epidemic disease nor to any want of attention or care on the part of the very competent medical officers in charge.

The Board of Visitors warmly commend the condition of the academic grounds and also the buildings, with certain exceptions. They find that the building used as quarters for the cadets is too small for the necessities of the institution and the health and comfort of the occupants, and renew the recommendation of the board of the previous year, that an additional wing be built at the rear of the new building, "in order that the entire body of cadets may be domiciled under one roof." They report that the old wooden structure now used for marine barracks is both unsafe and unsightly, and not adapted to the health, convenience, or protection of the occupants, and give it as their opinion that it should be removed as speedily as possible and an adequate building be erected in its place for the accommodation of the marine guard. They also recommend that the old and dilapidated armory be removed and a suitable building be erected without delay, as they consider it a discreditable feature of the Academy grounds. This recommen-

dation is also concurred in by the superintendent, who has caused an estimate for a new building to be made.

These suggestions and recommendations are all important, and I invite special attention to them.

By the law as it stood before the passage of the act of June 17, 1878, the President was authorized to appoint ten cadet midshipmen at large annually. This was manifestly designed, to some extent, for the benefit of officers of the Navy and Army, inasmuch as they are generally unable to acquire a residence in any particular Congressional districts, so as to enable them to have their sons educated at the Academy in that mode. The officers of the Navy spend their lives in the service of the country, and much of the time abroad, and, consequently, every just consideration suggests that their sons should share equally with the sons of others in the benefits to be derived from this public institution. I therefore recommend that the proviso to the act of June 17, 1878, be repealed, leaving the law as it stood before it was enacted.

At present the course of education and training of a cadet-midshipman requires six years, four at the Academy and two at sea, before final graduation. It has seemed to me that if this were reversed, so as to require the first two years of training at sea, it would be better. It would serve to ascertain the fitness of the cadets for naval life and better enable them to comprehend the theory of navigation. Their practical experience gained at sea would materially assist them in all their professional studies. It is undoubted that, as boys, they would obtain far more practical information in the nautical branch of their profession than they would afterwards acquire as young men. Their first impressions acquired at sea would influence their whole official and professional lives; and if they should be found during the two years at sea to possess the seeds of disease, or should be unfit for a naval life, the expense of their professional education would be saved.

#### TORPEDOES.

Torpedoes, as offensively and defensively used by ships of war, have continued to engage the earnest attention of the department and the Bureau of Ordnance. The torpedo station at Newport, R. I., presided over by an experienced and zealous officer, who is ably seconded by expert assistants, has, during the past year, given continued attention to this important subject, and has actively engaged in the examination and testing of various submitted devices. Although no specially brilliant results have crowned this labor, many improvements have been introduced into the service supplies, tending to their greater simplicity and certainty of action. This station has also continued the instruction of a detail of officers, sent there for the purpose, in the elements of torpedo warfare and in the practical manipulation of the present service torpedoes.

Should war unfortunately break out, a body of officers would be found in the Navy well prepared to superintend the construction, and another

group to operate with judgment and skill this important weapon of war. And it may be said with perfect propriety that a comparison of our torpedo supplies and of the technical information of our torpedo officers with those of other countries furnishes the well-grounded belief that we are, in this branch, fully up to the present standard of the world.

#### APPRENTICE OR TRAINING SYSTEM.

Since the passage of the act of March 2, 1837, boys between the ages of sixteen and eighteen have been enlisted to serve in the Navy until they have arrived at the age of twenty-one. Such enlistments, however, were not numerous enough for some years to attract special attention, inasmuch as no method of training and discipline had been adopted beyond what was necessary to fit them for the duties of ordinary seamen. When the fitness and character of our seamen became more carefully considered, it was deemed advisable to extend this system of apprenticeship so as to make it more effective by giving to it a reformatory character. Consequently the department, in 1875, through the Bureau of Equipment and Recruiting, partially matured the plan which still continues in operation, with such additions as have been suggested by experience. It can scarcely be said that it had progressed so far as to promise any decisive and valuable results until the year 1877, when the number of enlisted boys had reached five hundred and seventy-nine, four hundred and fifty-eight of whom were then receiving instruction on board the training-ship *Minnesota* at New York, the *Constitution* at Philadelphia, and the *Saratoga* at Norfolk. The remainder, who were then serving on cruising vessels at sea, had not been brought under the immediate influence of the system which then prevailed on these training vessels, and the plan devised contemplated such an organization as would thereafter require that all enlisted boys should have the full benefit of the system before being sent to sea in cruising vessels. The advantages of this method were already becoming apparent. The Chief of the Bureau of Equipment and Recruiting at that time in his annual report thus spoke of these boys: "That these boys are doing their duty manfully is indicated by the fact that there is scarcely a ship in commission which has not applied for its quota, to take the place of the late landsmen of the Navy." And with reference to the idea of so extending the system as, in the end, to furnish to the Navy the whole body of seamen required by the service, he also said: "The above proposition would bring into that portion of the service a fresh element of young and thoroughly-trained American man-of-war's men, and would present an additional inducement for the enlistment of American-born boys."

The system has thus far worked admirably well, even beyond the anticipations of its most sanguine advocates. Its influence is felt throughout the entire naval service. Wherever the boys have been placed they have discharged their duties well and satisfactorily, and the commanders of all the ships upon which they have served speak of them in the



most commendatory terms. If it shall receive the continued support of Congress, which there is no reason to doubt, we may expect that within a few years the whole body of our seamen will be composed of American-born citizens, upon whose attachment to the government we can rely both in peace and war.

It is designed to give somewhat more efficiency and vigor to the system by constituting a training fleet, composed of the training ships, under the separate command of some superior officer, who shall have supervisory care. This will secure the necessary uniformity of action by making the method of education and training the same on all the ships. And when, by this and other auxiliary means, the boys shall be made to feel the influence of a just spirit of emulation, they will be likely to strive with increased energy after the advantages held out to them by the law as it now stands and those they may reasonably expect when the system shall be better matured. At present the act of May 12, 1879, requires that in the appointment of warrant-officers—boatswains, gunners, carpenters, sail-makers, and mates—preference shall be given to such apprentices as have been honorably discharged upon the expiration of their enlistment and have re-enlisted within three months thereafter, to serve during a term of three or more years. This involves necessarily an inquiry into their qualifications for these positions, which must be made by the examination of competent boards organized for that purpose. Applications of the kind are already on file, and when the necessary steps have been consummated to fill such vacancies as may occur, the practical working of the system will be more apparent to the apprentices themselves. The department will do all within its power to see that full justice is done them, and indulges the hope that, as the system shall in the future become more matured, the opportunity of still higher advancement will be afforded by law, so that these boys may be fully rewarded according to their merit. If to the proficiency in practical seamanship they may be expected to acquire during their apprenticeship they shall exhibit a fitness for higher promotion, it will be for Congress to decide hereafter what provisions, if any, shall be made to open to them the field of official and professional advancement.

#### FOREIGN COALING STATIONS.

The commercial importance of the Central and South American States never attracted more universal attention than at present. Their tropical productions are a necessity to all the nations. And inasmuch as they are in such close proximity to us, and need to be supplied with many of our productions in exchange for theirs, our own interests demand that we should not suffer the trade with them to pass entirely out of our hands, as it is likely to do if we do not adopt prompt and vigorous measures to secure it. Already the greater part of it is enjoyed by the European nations—the result, probably, of mere inattention on our part—but there is every reason for believing that, by means of a steady policy

especially directed to that end, much, if not the most valuable portion of it may be obtained by us.

All that the Navy Department can properly do to this end has been done. I have deemed it an imperative public duty to send our ships of war into as many of their ports as possible, with the view of enabling the authorities and people of those countries to understand that it is our desire to cultivate with them the most amicable commercial relations, and that both their own interest and ours would be thereby promoted. In 1878 I caused the United States man-of-war *Enterprise* to explore the Amazon and Madeira Rivers, in South America, hoping to bring the people of Bolivia to realize the advantages that would be likely to result to them from the establishment of commercial relations with us. The result of the expedition was satisfactory, and there is reason to believe that when communication with the interior of Bolivia shall be established, the manufactures of our country, with which they have not yet been supplied, will find their way there. The products of South America which reach the Pacific coast can only reach this country by way of San Francisco or the Isthmus of Panama. Consequently I have also felt it my duty to inaugurate such steps as were calculated to establish more intimate relations with the States and people upon each side of that Isthmus. The authority of the Secretary of the Navy is limited upon this subject, and does not extend beyond the location of stations at points where our vessels touch, or may be induced to touch, in order to promote commercial intercourse where it is already established, or to invite it where it is not. I have, therefore, caused steps to be taken for the establishment of a coaling station upon each side of the Isthmus, at points eminently suitable both as it regards naval uses and the commerce of that region. The one on the east side is located at Chiriqui Lagoon, in the Caribbean Sea, and in the immediate vicinity of veins of coal already opened; and that on the west at the Bay of Golfito, a part of Golfo Dulce, on the Pacific. The distance between them is less than one hundred miles. The only two safe and sufficiently commodious harbors on the Isthmus are at these points, and although the department did not, before making the deposits of coal, acquire title to the lands occupied, yet it assured itself that no difficulty would be likely to arise on that score. Although it was not anticipated that any political objection would be made to the preliminary examination and survey of these waters, with so useful an object to these ports as well as to this government in view, yet careful instructions were given to the commanders of the vessels assigned to the performance of the duty, to the effect that if either government interposed any objection to the movement they should immediately suspend operations and report the matter to the department, in order that it might be made the subject of diplomatic negotiation. Inasmuch, however, as no obstacle of this kind was encountered either at Chiriqui Lagoon or Golfito, coal, in sufficient quantities, was deposited at each harbor, and now remains there

for future use by our vessels whenever it may be needed. The question of acquiring title to a sufficient quantity of land upon these harbors is necessarily left for the subsequent action of the government.

The initiatory steps have also been taken to establish a like station at Punta Arenas, in Costa Rica, and it is believed that the department will be enabled to accomplish this before the expiration of many months.

With all these harbors made immediately accessible to our ships, by means of these important stations, and such others as may become desirable hereafter, our intercourse with the people of the United States of Colombia, of Costa Rica, and of Nicaragua will soon become more direct and intimate than it has hitherto been. That it will produce favorable and beneficial results both to them and us cannot be doubted. The more frequently our ships of war visit them, and the better acquainted they become with us and our policy, the more readily they will be assured that we have no other object than to advance their welfare along with our own, and that we desire them to regard us as friends in every sense, and not as enemies in any.

By our treaty with the authorities of the Samoan Islands we acquired the right to establish a coaling station upon the bay of Pago Pago, on the principal island of the group. This right was not exclusive of such occupation of that port by other governments as would not interfere with our superior right of preference in the retention of whatever part of the port we desired for our own accommodation, and I have caused the most eligible and desirable position to be selected, and have directed a coaling station to be established. It is already supplied with several hundred tons of coal, and is a most important acquisition, inasmuch as Samoa is upon the ocean route from the United States to Australia, being about two thousand three hundred miles from Sydney.

It is far better, and much more economical, that our vessels should be supplied with coal at coaling stations owned and controlled by the Navy Department, than to be compelled to pay the prices often exacted from them in foreign ports, where they are frequently imposed upon by extortionate monopolists. It would be greatly to the advantage of the United States, and contribute much towards the economical management of the Navy Department, if acquisitions similar to those I have mentioned were made in other parts of the world, within the courses of our existing and contemplated commerce. The strong maritime powers of Europe employ great vigilance in this particular, and we should not be behind them in doing what we legitimately and properly can to extend our maritime influence over the world. While our policy is strictly peaceful and forbids any violation of international comity, much more may be done than has been towards extending our influence, commercial and otherwise, without doing any violence whatsoever to the rights and interests of other nations. Our national progress cannot justly create any antagonism between us and other powers, but it requires that we

should stand upon perfect equality with them in all parts of the world, in reference to all those rights and interests which by the acknowledged principles of public law all the nations may enjoy in common.

#### THE CRUISE OF THE TICONDEROGA.

The cruise of the Ticonderoga had special reference to the increase of our commerce. The first duty required of Commodore Shufeldt, her commander, was that he should visit Monrovia with the understanding that if it became necessary he should act as umpire in settling a disputed question of boundary between Great Britain and Liberia. His instructions, however, required him, after leaving Monrovia, to visit both the western and eastern coast of Africa and hold such intercourse with the natives to whom he could obtain access as would enable them to appreciate the advantages of trade with the United States. He was also instructed to visit Madagascar, India, China, Japan, Corea, and the intervening seas and islands, with the same object in view. The special purpose of his visit to Corea was to prevail, if possible, upon the authorities of that kingdom to open their ports to the commercial world. He was regarded by me as specially qualified for this delicate and difficult task, having commanded the Wachusett when she visited there in 1867 to thank the Corean authorities for the humane treatment extended to the crew of the American schooner Surprise after the wreck of that vessel upon the western coast during the previous year, and being familiar with all the circumstances connected with the massacre of the crew of the General Sherman, and the subsequent relations between the United States and the Corean Government, growing out of the visit of the Shenandoah in 1868, and the collision and capture of the Corean forts in 1871.

The voyage of the Ticonderoga has consumed about two years, and its results have not only been eminently satisfactory to the department, but have reflected the very highest credit upon all the officers and crew. Owing to the care and vigilance of Commodore Shufeldt and the other officers, and to the general good conduct of the men, the vessel has gone in and out of port over fifty times and traversed thirty-six thousand miles without an accident to her and without any loss of life, except such as resulted from natural causes. The information communicated during this voyage is of great value, and would, if it were possible to embody it in this report, contribute materially to our knowledge of the commercial wants of the peoples who have been visited. Large quantities of such manufactured goods as are used in the different markets have been forwarded to the department with invoices of their prices, and these have been distributed among our own manufacturers so as to enable them to decide whether or not they can afford to compete in these markets with the manufacturers of Europe.

During her voyage the Ticonderoga touched at all the principal ports on the west coast of Africa—at St. Helena, Capetown, the island of Mada-

gascar, Johanna Island, Zanzibar, Aden, and Muscat, in Arabia; Bunder, Abbas, Ormuz Island, and Bushire, in Persia; Fao and Busrah, in Turkey; Bombay, the island of Ceylon, Malacca, Borneo, the Philippine Islands, China, Japan, Corea, and the Sandwich Islands. She was the only American man-of-war ever seen in the Persian Sea or near the mouth of the Euphrates River, and by sailing some distance up that river has brought our form of modern civilization in immediate contact with that prevailing among those who represent the oldest civilization known to history.

While Commodore Shufeldt did not succeed in obtaining the consent of the Corean authorities to open their ports to commercial intercourse with us, yet it is believed that he was enabled to remove much if not all of the irritation which our former relations may have occasioned, and has laid the foundation for future success. Existing complications, originating mainly in the movements of other powers who occupied threatening if not hostile relations with Corea, stood in the way of any direct intercourse with the King; but as it is not probable that these were designed to interfere improperly with the domestic affairs of Corea, there is some reason to suppose that, when the effect of them has passed away, the Coreans will see the necessity of establishing amicable commercial intercourse with other parts of the world. It is scarcely possible that they will remain much longer uninfluenced by the examples of China and Japan, especially when they learn from their necessary intercourse with these nations how materially they have been benefited since they felt the influence of modern progress. And if they shall be persuaded hereafter to yield to the influence of these examples, the result may be attributed, in a great measure, to the judicious and friendly bearing of Commodore Shufeldt during his recent visit.

The Pacific Ocean opens to our future commerce its broadest and most profitable field. Upon the Atlantic it encounters such formidable European rivalry as can only be overcome, if at all, by the most persistent and vigorous measures of protection on the part of the government. But our acquisition of Alaska and the Aleutian Islands, and our treaty relations with Japan, the Sandwich Islands, and Samoa, together with our present commercial intercourse with China and the East Indies, place us upon such equal terms upon the Pacific with other powers that it will be our own fault if the advantages now promised to our commerce shall be lost. An exchange of our products for those of the East is fast becoming a necessity to all the oriental people, and their interests, as well as ours, suggest the adoption of the most efficient measures on our part to increase our trade with them. Even in Corea our manufactured goods are preferred to those of England, but they find their way there through the Japanese, with whom the Coreans have a treaty of amity and commerce. The benefits derived in this way, however, are indirect, and would be greatly increased if the ports of that country were opened to our merchant vessels. Our relations with the Japanese Government are



such that there is no reason to doubt its friendly agency in bringing about this result, and it is confidently believed that it will be accomplished in a short time.

#### THE JEANNETTE.

By the act of February 27, 1879, the Secretary of the Navy was authorized to accept and take charge of, for the use of a North Polar expedition by way of Behring's Straits, the ship *Jeannette*, the private property of James Gordon Bennett, esq., and by him devoted to that purpose. He was also authorized to use any material on hand in fitting the vessel for this voyage, upon the condition that the department should not be subject to any expense on account thereof. The vessel was accepted under the provisions of this law, and after a thorough examination it was deemed best, on account of the hazardous nature of her contemplated voyage, that her capacity to resist the pressure of the ice should be increased. This conclusion was precautionary merely, inasmuch as she been well constructed and was believed to possess ordinary strength. Accordingly, a large amount of work was done upon her at the expense of Mr. Bennett. She was furnished with new boilers, and put in as perfect condition as possible before leaving the port of San Francisco, July 8, 1879. Iron box-beams were introduced abaft and forward of the boilers to strengthen her sides. Additional wooden hooks were introduced and fastened through and through. Her extreme fore-end, to the extent of about ten feet from the spar-deck down, was filled in with solid timber and calked. Additional strakes and plank six inches thick were introduced to strengthen her bilge, and her deck frame was renewed where required. All these repairs were so carefully made as to give every reasonable assurance that the vessel would be able to overcome any of the ordinary perils incident to navigation in the Polar Seas.

The *Jeannette* was placed under the command of Lieut. Commander George W. De Long, and Lieuts. Charles W. Chipp and John W. Danenhower were detailed as his assistants.

The only communication received by the department from Lieutenant De Long, since he left San Francisco, was dated August 26, 1879, at St. Lawrence Bay, Siberia. He says: "I have hopes of reaching Wrangel Land before going into winter quarters," and there is no reason to doubt that he made every effort possible to courageous and competent officers and crew to accomplish this. If he did reach there and thus escape the floe of ice which is supposed to have caused the loss of some whaling vessels during the last fall, he must have passed the winter upon land, as it is satisfactorily ascertained that the mountainous regions of Wrangel Land extend to the coast, and, although uninhabited, furnish the means of subsistence. In this event he probably sailed as soon after the opening of the spring as possible and has since reached the open sea beyond. Of course this supposition is problematical only, but, after a careful consideration of all accessible information, the de-

partment is disposed to rely upon it as true. On September 2, 1879, Commander De Long addressed a communication to the New York Herald from Cape Serzge, which is the last point upon the coast of Siberia he would be likely to touch before fully entering the Arctic Sea. Afterwards the Jeannette was seen a short distance east of Wrangel Land, about 71° north latitude, where she probably encountered the ice then floating southward, in what Professor Nordenskjold calls its "cold ice-carrying current." Although the Jeannette is sufficiently strong to resist an ordinary floe, and far more able to do so than any whaling vessels afloat, yet the ice may have been in sufficient quantities to render it a prudential step for her commander to sail again to the southward and westward, in order to find protection west of the ice-floe and somewhere upon the coast of Wrangel Land. Consequently if that island was reached either upon the eastern, southern, or western coast, it is a fair presumption that the winter was spent there and the ship kept in safety, ready to go to sea upon the opening of last spring. And if this was accomplished there is no reason to suppose, in consequence of her not having been since heard from, that she is now lost, inasmuch as Commander DeLong has had no opportunity of holding intercourse even with the natives of any part of Siberia, and may not be again heard from for some months. The department has possession of a letter written from Petropavlovsk, Kamtchatka, September 22, 1880, wherein it is stated that the writer while in the Arctic Ocean had fallen in with a whaling vessel, the officers of which informed him of a rumor that the Jeannette was lost. He does not state either the time or place of this communication, and we are left to infer, as he had sailed westward to Kamtchatka, that whatever rumor was in circulation must have been conveyed to the whaling vessel by the natives on the south side of Siberia or that part which lies immediately west of Behring's Straits. A report received from either of these sources is scarcely entitled to credit. If the Jeannette had been lost, information of the fact would have reached the natives on the north side of Siberia before it could have been communicated to those on the south side, and in the mean time would have reached Behring's Straits before Captain Hooper, of the United States revenue cutter Corwin, visited there on her return. Whereas Captain Hooper heard nothing of the sort, and confirms the opinion adopted by the department, by saying in his official report: "I have no fears for the safety of the officers and crew of the Jeannette. The fact that they have not been heard from seems to indicate that the vessel is safe and that they consider themselves able to remain another year at least."

#### ALASKA TERRITORY.

The unsettled condition of affairs in Alaska rendered it necessary that prompt measures should be taken, during the last year, to give protection to persons and property in the vicinity of Sitka. Accordingly, the Jamestown was placed under the command of Commander L. A. Beards-

lee, and ordered to proceed there. Owing to the want of full information his instructions were necessarily of a general character, leaving much to his own official discretion. The vessel has remained there ever since—about eighteen months—and Commander Beardslee having been relieved, in consequence of expected early promotion, she is now under command of Commander Henry Glass.

Upon his arrival at Sitka Commander Beardslee found the society very much agitated by fear, and immediately organized such measures of relief as appeared to him to be necessary. He was fortunate in being able to restore quiet, and, with the co-operation of the collector of the port and the consent of the citizens, to establish a system of regulations, which has furnished the only means of preserving peace and quiet. These regulations have not, of course, the force of law, and would, in all probability, become ineffectual if it were not that they are enforced by the presence of officers of the Navy, backed by an armed vessel. Important information in relation to these matters has been heretofore communicated by me to Congress, with the design of showing the embarrassments which the department has experienced in being required to deal with the affairs of civil government, so foreign from any of the duties required of it by law. It has none of the machinery necessary for this purpose under its control, and whatsoever it does in that direction must proceed alone from military power. The substitution of this for the civil authority is contrary to the spirit of our institutions, and I cannot refrain from the expression of the earnest hope that Congress will speedily relieve the department from the responsibilities which attach to its present anomalous position.

When the Jamestown arrived at Sitka, in May, 1879, it was found that there were two villages, side by side, one inhabited by several hundred Indians, and the other by a much smaller number of whites. Among both some lawless and insubordinate characters were found, but that the mass of these communities do not deserve this stigma is made evident by the fact that for three years peace and quiet had prevailed amongst them, although Indian law and custom prevailed in one, and no law or government, for a large portion of the time, in the other. Each year after the military forces were withdrawn the number of the Indians increased, while that of the whites decreased. Petty quarrels remained unsettled, and there had gradually grown up, on the part of the Indians, a contempt for the white race which was badly represented, and on the part of the whites a fear of and hatred towards the Indians. These quarrels assumed importance when, early in 1879, a miner, who had been involved in some difficulties with the Indians, was killed by them. The murderers were arrested and tried at Portland, in Oregon, and one of them was executed. While under arrest at Sitka, an attempt was made to rescue them, which, however, was frustrated by the acts of friendly Indians. The failure of this attempt and the subsequent execution of the criminal would have undoubtedly resulted, sooner or

later, in a massacre of the whites but for the prudential and preventive measures adopted. The prompt action of Capt. A. Court, of the British ship Osprey, checked the rising trouble, and the arrival of the United States man-of-war Alaska, which had been sent there before the Jamestown, and the subsequent arrival of the Jamestown, convinced the Indians that an attempt to injure the whites would be attended with danger. They consequently refrained from such an attempt; but both parties had, by this time, come to hate each other, and there was evinced among some of the whites, a disposition to take advantage of the presence of a war vessel, and to treat the Indians unjustly. When, however, these difficulties were overcome a better condition of things was brought about, and affairs have been gradually improving. The influence of Commander Beardslee and the other officers of the Jamestown has been exerted successfully in bringing the two communities into harmonious relations. They have all realized the fact that white men who injure Indians are subject to punishment quite as promptly and as thoroughly as are Indians who injure whites; and this, coupled with the further fact that all offenders are fairly tried in open court, and the punishment measured in all cases by the degree of crime, has created a perfect sense of security. Of course, nothing short of the most positive necessity could have justified these proceedings on the part of naval officers, but as this necessity was apparent to all, it soon met the approbation of both whites and Indians, and the latter soon fell into the habit of referring all their disputes to Commander Beardslee for adjustment, and in all cases acquiesced in the justness of his decisions. Many of the Indians were given employment by him, and their constant contact with the officers and crew proved very beneficial, inasmuch as no quarrels ever occurred between them. By these means the Indians were brought gradually to the conviction that the whites were their friends, and that they could rely upon the kind of government they were disposed to construct for proper protection.

The Indians of Sitka are in constant communication with the other coast tribes, from most of which great numbers of visitors come to Sitka. The effect is that the good impression made upon the Sitka Indians is communicated to and spread among them. Commander Beardslee and other officers of the Jamestown made trips to various villages, and, by degrees, the good results of this friendly intercourse became apparent. The various coast tribes—as the Kootznoos, Hoonahs, Chilcats, and Chilcoots—withdrew their opposition to white men coming among them, and, at the present time, there are respectable white men, living alone or in couples, at the villages of the above-named tribes. During the past summer a party of pioneers have been permitted to go into the interior and prospect the country. Their party has returned to Sitka, and they report that they were treated in the most friendly manner by all the Indians with whom they came in contact. Upon a visit made by

Commander Beardslee himself to the various villages where white men are living he received from all of them the same report.

Much of the good thus far accomplished is due to the great change in the white community at Sitka. As the Indians became orderly, families were sent for by men who had previously been unwilling to subject their wives and children to the dangers they knew they would have to encounter. The influence thus created operated beneficially upon the Indians, as was soon demonstrated by the desire to have their own children educated. Commander Beardslee attributes their improved and improving condition to the schools and the church which have been established and are now in satisfactory operation. He gives it as his opinion that, at present, there is not in Southeastern Alaska an Indian tribe which has not the most friendly feelings for the whites. He estimates the number of whites now in Sitka as equal to that of the Indians, and far better armed. There are enough men capable to protect it and themselves in case, through the actions of bad men, difficulties should again arise, and he does not think that the continuance of a vessel of war at that place will be much longer necessary, although it is to many of the people an advantage, inasmuch as the money disbursed by that means forms a large proportion of that which is in circulation. But if the Jamestown is withdrawn without the substitution of some authority with the proper degree of strength to maintain order, it is more than probable, in his opinion, that acts will be committed by some of the lawless whites who will be drawn to Alaska by the very fact of there being an entire absence of law. This would undoubtedly tend to undo all the progress thus far accomplished and throw the community again into anarchy. A simple code of laws, with a court possessing full power to try causes, to adjudge a death sentence and execute it without unnecessary delay, backed by sufficient authority to strengthen the orderly Indians, is considered a vital necessity. The necessary judicial authority can be conferred upon justices of the peace, and there is every reason why such officers should be created and armed with the authority of law. It is an anomaly that a community should exist within the limits of the United States where there is an entire absence of judicial authority, and where there is no other protection for life or property than that which proceeds from the discretion of the Navy Department and the officers selected by it. There is no officer in Alaska authorized to administer an oath. Army officers who were once stationed there had the support of several acts of Congress which enabled the Secretary of War to clothe them with legal functions, but it is not so with those of the Navy. The collector of customs, who is the only government official in Southeastern Alaska, and who is expected to perform many duties not usually required of such an officer, has no power whatever except that which his own character may enable him to assume. And the naval officer has but the physical power which his crew and guns give him. By an error of judgment his force could be frequently so used that harm instead of good would result. Under all these cir-



cumstances, therefore, Congress cannot be too earnestly urged to enact, at the ensuing session, some law for the institution of the necessary civil authority in Alaska.

White citizens are now being drawn to the southeastern part of that Territory by hopes of future wealth, which they expect to derive from its great natural resources of timber, furs, fish, and minerals, either of which is represented as being worth the money paid for the country. The Territory needs only the protecting hand of the government and the security to capital, life, and order, which local laws and suitable judicial tribunals would give it, to advance rapidly in value.

#### RELATIONS OF THE NAVY TO COMMERCE.

In each of my annual reports for the years 1877 and 1878 I called special attention to the relations between the Navy and the commerce of the country. What I then said has gained fresh importance by the constantly increasing surplus of our agricultural and manufacturing products, now being sent by sea to all parts of the world. To this immense commerce the Navy is a necessary ally, and must at all times be prepared to furnish it protection. It is impossible to do this effectually unless a sufficient number of the right kind of vessels are constructed, not for cruisers merely, but for all the purposes of war when the emergency shall require it. The cruisers we now have are constantly employed in the various seas, and it is gratifying to know that our flag is so much respected in all parts of the world that very few instances have occurred where our merchant vessels have been interfered with. But, undoubtedly, it is true that whether the Navy be regarded as the protector of our commerce or as an essential means of national defense, the number of vessels should be increased. And it is equally true that good policy requires the national government to employ all its legitimate powers to increase the strength of our mercantile marine, so that it may become commensurate with all the wants and necessities of our commerce. The increase of one should be proportionate to that of the other.

Our material wealth is, in a large degree, the product of our commerce upon the ocean. As this is extended so will our wealth be increased, and as at no time in the past has this wealth increased so rapidly as at present, now is a most opportune time for us to extend to it the necessary degree of protection. This is conceded on all hands, but about the best method of doing it there are differences of opinion.

It is not the province of Congress to build vessels for the merchant service, nor is it expedient or possible to allow commercial articles to be transported upon vessels of war; but it undoubtedly is within its constitutional powers to give the necessary protection to our ship-building interests, so as to justify an increase of our mercantile marine to such an extent as the necessities of our commerce shall require. It is entirely competent to arrange with private ship-builders with reference to the extension of our postal service upon the ocean, and to require that the

vessels used for that purpose shall be so constructed that, in the event of war, they may be employed immediately for war purposes. Such vessels, built both for strength and speed, would add most materially, in case of necessity, to our means of national defense, and the increase of our naval force by this means would soon enable us to compete upon the ocean with the strongest naval powers in the world. England owes her present naval superiority to this policy, and it serves no valuable purpose to contrast our condition with hers unless we shall profit by her example. So long as her merchant vessels, built under her protection and patronage, are allowed to draw annually from our wealth about \$100,000,000, as compensation for freighting our commerce, just so long will our inferiority exist. Whenever our own commerce shall be carried on in vessels owned and built by our own people, capable of being turned into ships of war when necessary, then we shall reach the point of equality with her, and be prepared, when the necessity shall arise, to test with her the question of superiority upon the sea. Before the war we had nearly succeeded in running British vessels from the ocean, and since then have contented ourselves with uttering complaints against England for her agency in destroying ours while the war was in progress. The time for active and energetic measures has now arrived, and every future year of neglect will add to our inferiority.

R. W. THOMPSON,  
*Secretary of the Navy.*

The PRESIDENT.

# PAPERS

ACCOMPANYING

## THE REPORT OF THE SECRETARY OF THE NAVY.

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### REPORT OF SUPERINTENDENT OF THE NAVAL ACADEMY.

UNITED STATES NAVAL ACADEMY,  
*Annapolis, Md., October 30, 1880.*

SIR: I have the honor to report that during the past year the prescribed course of studies was satisfactorily pursued to the close of the academic year, the 10th June last, when the cadet-midshipmen and cadet-engineers of the then first classes who had completed the four years' course of studies were detached, being available for active service, and the remaining classes of cadet-midshipmen embarked in the practice-ships *Constellation* and *Dale*, and of the cadet-engineers in the steamers *Despatch* and *Standish* for the summer cruise.

The examination of candidates for admission as cadet-midshipmen commenced on the 11th June, when twenty-seven presented themselves, and on the 16th, when the examination was concluded, one was found physically disqualified for the service, nine found not duly qualified for admission, and seventeen found duly qualified and admitted into the academy as cadet-midshipmen, and were afterwards transferred to the practice-ship *Dale*, and performed the practice cruise.

The academic years being closed, the officers, professors, and others of the academic staff, &c., were detailed for their respective tours of duty during the summer, and the usual leave of absence granted them.

The practice-ships having sailed on their summer cruise, I left the academy on the 14th July, and visited the ships, and it is highly gratifying to me to state that I found them all in a high state of discipline, with officers, cadets, and crew contented and happy.

The *Constellation* arrived at this station June 12, having just returned from Europe, whither she had conveyed provisions, &c., to the relief of the Irish sufferers, and on the 14th Commander E. E. Potter and all the other officers then attached to her, save Passed Assistant Surgeon C. U. Gravatt, were detached, and she was turned over to the academy as a practice-ship, and officered by others attached to this institution, but having no battery aboard, she was ordered to New York to get it, &c., and such other stores as were needed, and also to fill up the complement of her crew. This being done, no time was lost in making her organization effective, and I cannot speak in terms too commendatory of Commander E. M. Shepard and the officers of his ship, who have devoted themselves assiduously to the discharge of their duties.

The steamers *Despatch*, Lieut. Commander F. A. Cook, U. S. N., and *Standish*, Lieut. Commander C. J. Train, U. S. N., in company with the several classes of cadet-engineers aboard, I proceeded on the summer cruise for their professional instruction, visiting our principal navy-yards, machine and engine shops, rolling-mills, dry-docks, ship-yards, &c., and it gives me pleasure to testify to the uniform kindness with which the cadets were received by the proprietors of these establishments, and to express my warmest thanks for the many and great facilities afforded the cadets for acquiring information and instruction during their stay at

these places, and also to the good results of the cruise, as well as to the efficiency and zeal of their officers.

The Dale cruised in the Chesapeake Bay and its tributaries and consequently did not have the variation in her cruise that the other practice-ships had, and yet such were the indefatigable efforts of Lieut. Commander E. White and his officers and crew, that the ship anchored and got under way forty times, thus affording fine opportunities for acquiring a knowledge of seamanship, which I am happy to say were availed of; and, that on visiting her in Hampton Roads, and witnessing the exercises aboard of her, I was well convinced that their efforts had been crowned with success, and that too much credit could not be given them for her efficiency and the beneficial results of her cruise. The cadets embarked constituted the present second class, a member of the third class, and a portion of the present fourth class, viz, those appointed in June; making, in all, 64 cadets.

The examination of candidates for appointment as cadet-engineers commenced September 15. One hundred and sixty-seven reported and were subjected to competitive examination; 2 were found physically disqualified, and a merit roll of all examined transmitted to the Navy Department; and the 25 who passed highest in order of general merit were, in conformity with the law, appointed cadet-engineers and received into the Academy.

The examination of candidates for admission as cadet-midshipmen commenced September 22. Thirty-nine reported for examination; 3 were found physically disqualified for the service; 10 were found not duly qualified for admission, and 26 were found duly qualified for admission and received into the Academy; One of whom having previously passed the examination for appointment as a cadet-engineer, elected that appointment, and his vacancy was filled without delay, making 222 cadet-midshipmen and 106 cadet-engineers. Total, 327 cadets in the institution.

The estimates for the support of this institution for the fiscal year ending June 30, 1882, were transmitted to the department on the 15th instant. I have also submitted an estimate for an armory and an estimate for alterations and repairs, deemed necessary to the building of the department of steam-engineering, suggested for insertion in the sundry civil bill, and bespeak for them the favorable consideration of the department and of Congress.

That the department may be fully informed relative to the practice cruises, I transmit herewith copies of the reports of Commander E. M. Shepard, Lieutenant-Commanders F. S. Cook, C. J. Train, and E. White, the respective commanding officers of the Constellation, Despatch, Standish, and Dale, with accompanying reports of the instruction of the cadets in professional branches, and particularly refer it to the detailed report of Passed Assistant Engineer J. C. Kafer, accompanied with copies (made with copygraph) of the drawings and text describing the same, of some of the work accomplished by cadet-engineers during the practice cruise, which will enable the department to judge more fully of the value of this cruise to the cadets.

In conclusion, permit me to express to the department my deep sense of gratification at the ability, skill, and zealous manner in which the commanding and other officers of the practice ships have discharged the important duties intrusted to them.

I am, sir, very respectfully, your obedient servant,

GEO. B. BALCH,

Hon. R. W. THOMPSON,

*Rear-Admiral, Superintendent.*

*Secretary of the Navy, Washington, D. C.*

## REPORT OF THE CHIEF OF THE BUREAU OF ORDNANCE.

BUREAU OF ORDNANCE, NAVY DEPARTMENT,  
*Washington City, October 1, 1880.*

SIR: I have the honor to submit the annual report of this bureau, with the accompanying estimates for the fiscal year ending June 30, 1882.

## ESTIMATES.

1. Labor, tools, materials, and fuel used in fitting ships for service, and in preservation of ordnance and ordnance stores; repairs to buildings, magazines, wharves, gun-parks, tugs, lighters, and boats.....	\$246,125. 00
2. Torpedo service.....	45,000. 00
3. Miscellaneous items, freight, telegrams, postage, advertising, &c.....	3,850. 00
4. Civil establishment at navy-yards.....	11,886. 25
	<hr/>
	306,861. 25

These estimates are, in the aggregate, less by \$28,025 than those for the present year, although the arrangement of the items differs to meet the requirements of the service. They only provide for the current expenditure in preparing ships for sea, and in preservation of the large amount of material at the several navy-yards and stations.

## ORDNANCE.

Our first and most pressing want is guns of the latest and most approved system. At present our ships are principally armed with smooth-bores on broadside, with XI-inch smooth-bore converted to 8-inch M. L. R. for pivots, and Parrott rifles converted to B. L. R. for forecastle guns. These converted guns have proved very safe and efficient, and use higher charges than before conversion, giving greatly increased velocity, range, and accuracy.

It would not be wise, considering the constant development of the offensive power of guns and resistance of armor, to provide armaments before we decide upon the types of armored and unarmored ships suitable to our wants.

The progress of gun construction has been so great as to reduce to second class the entire armament of the navies of the world. But this has been so recent that only model guns have been made, and there is not at this time a single ship afloat armed with the latest type of effective ordnance.

We have lost little or nothing by delay; there would be the same outcry of inefficiency if the Navy were armed with the best breech-loader of five years' date.

The chief of bureau has carefully followed the changes in construction abroad, and also the advance in facilities for manufacture in this country, and is certain that such guns as the Navy requires and demands cannot be made here.

By a suitable increase of weight and caliber, the same ballistic effect can be produced with low velocities as with the smaller caliber and high pressure and velocities; therefore, an efficient gun can be made of cast-iron, tubed on one of the successful plans, either breech or muzzle-loading, which have been proved by the Army. Weight and space are, however, controlling considerations in naval ordnance, and I am therefore of the opinion that steel is the proper material for our armaments.

To test the capacity of the machine-shops of the country, the chief of



bureau, in December, 1878, designed a 6-inch B. L. R., steel, to fire a 70-pound projectile with 35 pounds of powder.

It was only after great delay that a steel manufacturer could be induced to undertake to furnish a satisfactory ingot, and to this date—nearly two years—the gun is not completed.

The only foreign guns which have proved satisfactory are those of Krupp. This manufacturer declines to furnish single guns for experimental purposes; this bureau has had a standing offer to purchase a 24-centimeter and a 15-centimeter gun for experimental purposes, but does not think it in any way desirable to obtain a further supply abroad. The guns of other foreign manufacturers are not of sufficient excellence to warrant the purchase of even a single specimen. Until our furnaces can produce steel of the proper qualities it will be necessary to permit our gun-makers to obtain the ingots from any source available, to be completed on our own designs.

When the armor of the turrets of the Miantonomoh is determined, the class of gun should also be fixed.

The Lancaster being arranged to carry 8-inch M. L. R. on the main deck, four circular brake-carriages have been designed to embody improvements on those of the Trenton, suggested by a board of officers, and four with hydraulic buffer, designed by Commander M. Sicard, U. S. N.

#### MACHINE-GUNS.

Elaborate experiments abroad have shown the value of the larger class of machine-guns as a defense against the attacks of torpedo-boats, and for firing into the ports and sweeping the upper decks of ships. It is recommended that at least four be supplied to the smaller vessels, and six to the larger, to command an all-around fire. The bureau has purchased ten of the Hotchkiss revolver cannon of 37 millimeters, four of which are mounted on the Trenton, four on the Tennessee, and one on the Despatch, and one is kept for experiments at the Washington navy-yard. Rear-Admiral J. C. Howell recommends that each of the vessels of the European squadron be furnished with four, and the Trenton with two additional.

The projectile of this piece penetrates at 1,000 yards all the present torpedo-boats at an acute angle. It is also desirable to purchase some of the caliber 47 millimeters, the projectile of which penetrates plates of the thickness of the side of most trans-Atlantic steamers.

The 37 millimeters and Gatlings mounted in the tops will command the spar-decks of vessels, making it very difficult to serve guns or move about on unsheltered decks at short range.

#### MAGAZINE-GUNS.

The Hotchkiss repeating rifle has given great satisfaction, and the bureau has purchased 2,500 of them. These, with 250 Remington-Keene and 300 Lee guns, are sufficient to arm all the ships in commission with repeating rifles and to test the relative value of the three systems, viz, magazine in the butt, beneath the barrel, and detachable.

Pursuant to the provisions of the act of Congress of June 20, 1878, authorizing the sale of the arms of .50 caliber and the appropriation of the proceeds to the purchase of .45 caliber, the following sales have been made, viz :

6,000 Remington rifles, caliber .50, to D. W. C. Farrington, June, 1879, at \$4.50 each.

1,450 Remington rifles, caliber .50, to Winchester Repeating Arms Company, July, 1880, at \$4.50 each.

4,678 Remington carbines, caliber .50, to J. W. Frazier, April, 1879, at \$4.50 each.

79 Remington carbines, caliber .50, to Winchester Repeating Arms Company, September, 1880, at \$4.50 each.

1,200,000 obsolete and unserviceable rifle cartridges, caliber .50, to D. W. C. Farrington, February, 1879, at \$8 per M.

800,000 obsolete and unserviceable rifle cartridges, caliber .50, to M. Lissberger, July, 1880, at \$6 per M.

230,000 obsolete and unserviceable carbine cartridges, caliber .50, to M. Lissberger, July, 1880, at \$2.25 per M.

85,000 obsolete and unserviceable pistol cartridges, caliber .50, to M. Lissberger, July, 1880, at \$2.25 per M.

50 short Gatling guns, old model, to the Gatling Gun Company, October, 1879, at \$400 each.

The bureau has purchased thirty new model cased short Gatling guns, of .45 caliber, for \$1,000 each.

#### TORPEDO STATION.

The torpedo station, under the command of Captain F. M. Ramsay, has been engaged in experiments with explosives, to determine the amount necessary to destroy various obstacles and in general torpedo work.

Several aggressive torpedoes, which promise well, have been presented, and trials will be made to ascertain their utility.

The usual class has been graduated, and there is now a large body of officers well instructed in the use of torpedoes in naval warfare.

As this subject is still susceptible of great improvement, it will be necessary for the earlier graduates to take a second course to obtain the advantages of the accumulated knowledge since they were at the station.

I am, sir, very respectfully, your obedient servant.

WILLIAM N. JEFFERS,  
*Chief of Bureau.*

Hon. R. W. THOMPSON,  
*Secretary of the Navy.*

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### REPORT OF THE CHIEF OF THE BUREAU OF EQUIPMENT AND RECRUITING.

NAVY DEPARTMENT,  
BUREAU OF EQUIPMENT AND RECRUITING,  
*Washington, November 1, 1880.*

SIR: I have the honor to submit herewith the annual report of the operations of this bureau, with accompanying detailed estimates for the fiscal year ending 30th June, 1882.

During the past fiscal year, 75 vessels have been wholly or partially equipped at the several navy-yards, at an expenditure for labor of \$66,872.17, and for material, of \$624,380.43; a total of \$691,252.60. This expense has been defrayed from appropriation "Equipment of vessels" for fiscal year ending June 30, 1880. A large amount of material has, however, been used in addition, from the stock on hand, purchased from former appropriations.

The increased estimate under appropriation "Equipment of vessels" for the ensuing fiscal year is rendered necessary by depletion of the stock on hand at the several navy-yards, repairs to be made, and new

machinery to be supplied to the rope-walk at the Boston navy-yard, on account of a late fire, the advanced price of coal and its transportation, and the necessity of filling up our coal depots at home and abroad, the supply being nearly exhausted.

The increased estimate asked for under "contingent" is absolutely necessary, as of late years vessels from the Asiatic Station and on the Pacific coast are generally ordered out of commission at the navy-yard, Mare Island, Cal., which necessitates the bureau, according to law, to have their crews sent to an Atlantic port for discharge.

The transportation of a crew of 200 men from San Francisco, via Panama, costs about \$13,000; and if any vessel is to be manned there, the bureau, in almost every case, is obliged to send out men for that purpose, at the same rate of transportation; hence the necessity for an increase under said appropriation is obvious.

#### COAL.

There have been purchased at home and abroad, 43,713 tons of coal, costing, including freight, \$329,708.

#### HEMP.

One hundred and fifty-five thousand seven hundred and eighty-five pounds of Russia, 280,260 pounds Manila, and 112,075 pounds of American hemp have been purchased; a total of 548,120 pounds; costing \$53,936.

#### ROLLING-MILL.

This plant has rolled during the year 500,000 pounds of iron for various purposes under the different bureaus, and continues to give the highest satisfaction, turning out the finest qualities of rolled iron. So satisfactory is this iron in quality and price that the demand exceeds the capacity for production.

This mill has rolled plate iron of various thicknesses, and the plates have been subjected to searching tests in comparison with other highly approved plate iron purchased for boilers. The results show our metal to be of the finest quality.

#### FORGE AND ANCHOR SHOP.

This shop is constantly turning out anchors, &c., for this bureau, forged gun-tubes for Bureau of Ordnance, and shafts for Bureau of Steam-Engineering.

Numerous experiments have been made with ingot of "low steel." The results of these experiments do not admit of any doubt but that iron must give way to the metal known as "homogeneous metal" or "low-grade steel," metal for chain cables being about the only exception. In view of this fact the production of "low steel" becomes important to this shop, and as there are on hand under this bureau large quantities of excellent scrap the production of it is simple and economical.

#### SMITH AND CHAIN SHOP.

In this shop the experiments of welding by compression have been continued from last year, the results of which will not as yet warrant more than a continuation of experimental work.

At the "testing-machine" exhaustive experiments have been made in the manufacture of chain cables with the most satisfactory results.

#### GALLEYS.

This shop is constantly busy in the manufacture and repair of galleys, and every improvement which can be adopted advantageously is added to the now almost perfect galley in use.

#### RECRUITING.

There were 7,322 men and boys in the service on the 30th June, 1880. The enlistments during the year, to replace men discharged from service at the expiration of their terms, and from other causes, were 5,272.

It is most gratifying to state in this connection that the conduct reports from vessels in commission continue to show marked improvement in the morale of the personnel of the Navy, thus enhancing the efficiency of the service.

There are now employed on board the vessels belonging to the Coast Survey, at the Naval Academy, and on vessels of the Fish Commission, 696 men, which number taken from the effective force cripples the service very materially, and inasmuch as the men are employed upon special service, I would recommend that some special legislation be enacted for them, or the number of men at present allowed the Navy correspondingly increased.

On the 30th June last, 943 men were serving under continuous-service certificates. During the year 454 honorable discharges have been issued, including 381 continuous-service certificates, and 449 re-enlistments have been made under such discharges and certificates. One hundred and fifty-nine continuous-service men have received good-conduct badges.

Medals of honor have been issued by the Navy Department to 10 men for deeds of heroism, viz:

For rescuing shipmates from drowning, David M. Buchanan and John Hayden, second-class boys (apprentices) on the U. S. S. Saratoga; John Millmore, ordinary seaman, and Henry Simpson, first-class fireman on the Essex; William Johnson, cooper, U. S. S. Adams; Thomas W. Mitchell, landsman, U. S. S. Richmond; James Thaxter, ship's corporal, U. S. S. Constitution.

For special heroism on board of the U. S. S. Constitution, Henry Williams, carpenter's mate; James Horson, captain of top; James Mathews, captain of top.

#### TRAINING SYSTEM.

At the close of the fiscal year there were in the service 1,168 boys, distributed as follows: On training ships, 606; on cruising ships, 562.

During the year 807 boys have been enlisted, and 308 have passed out of the training ships and transferred to "cruisers." One hundred and fifty-eight boys have been discharged, of which number 84 completed their enlistments, having served on cruising vessels, 52 receiving continuous-service certificates and certificates of commendation.

The training ships Constitution, Saratoga, and Portsmouth have been cruising during the summer months beyond the limits of the United States, thus enabling the boys to put in practice the knowledge and experience gained since their entry into the service.

Experience proves that the Minnesota is too large and expensive for a cruising training ship, and I would renew the recommendation in my last report that the vessel be used to receive and prepare boys for the cruising training ships, and to be permanently located at some convenient station for that purpose. As the Minnesota has been used a large portion of the year for said object only, the plan has demonstrated the advantages of using a large vessel for such purposes, reserving the smaller training ships for exercises in seamanship, practice cruising, and for the advanced training necessary to fit boys for usefulness on cruising vessels.

The Minnesota was sent to the naval station at New London, Conn., in the month of December last, and remained there until the middle of May of this year, and I have to report that the place is not adapted for a permanent station for the training system. The health of the boys in the ship while there was considerably affected; the river is too contracted for boat exercises, and freezes in winter, and for the maneuvering of vessels the depth of water is insufficient for large ships.

The station is also too isolated, and this fact caused much discontent among the boys, causing many desertions from the ship during the period referred to.

I would earnestly recommend that Congress be urged to authorize a modification of the Navy ration, as applied to boys serving on the training ships, and to grant them their outfit of clothing upon enlistment. The pay of the boys is small, and in many instances when they have worked out their indebtedness for the clothing furnished it becomes necessary to replenish the same, thus placing them again in debt to the government, which becomes a source of discouragement.

The passage of laws authorizing these changes would be of great advantage to the training system, and would materially decrease the number of desertions, a large proportion of which takes place during the first year of service, and would also lessen the number of applications from parents and guardians for the discharge of their sons and wards from the training ships.

In conclusion, I have to state that so far the training system has met the most sanguine expectations of the bureau, as well as of the officers of the Navy, and it feels justified in saying that with proper care and judicious management in a few years the service can boast of having a quota of American seamen, that for intelligence and skill can compare favorably with any Navy in the world.

In the English Navy the boys are bound to serve from 14 to 28 years of age; this system secures better results; but in the absence of such legislation the bureau would recommend that the law in regard to the ages for the entry of boys into the service be modified from 15 to 18 years to 14 to 16 years, and that at least 1,500 boys should be allowed to be enlisted annually instead of 750.

In this connection the bureau takes pleasure to report the results of an examination of apprentices, lately held at Hampton Roads, by a board of officers, convened by order from this bureau.

There were examined representative apprentices from each ship having apprentices on board, of the squadron assembled at Hampton Roads, for the coming "Naval Review," and the general proficiency shown by them in the several branches, particularly in seamanship and gunnery, impresses the board favorably with the system under which they have been trained, reflecting great credit upon the officers intrusted with their instruction, as well as upon the boys themselves. The examination resulted as follows:



*Seamanship.*—First-class medal—Francis Moore (ordinary seaman, apprentice), Portsmouth; three years and six months in the service; age eighteen years and four months.

*Seamanship.*—Second-class medal—C. P. Kelly (ordinary seaman, apprentice), Galena; one year and six months in service; age eighteen years.

*Seamanship.*—Honorable mention—Philip Hazard (seaman, apprentice), Constitution; Philip Van Voast (first-class boy), Constitution; William Hertel (ordinary seaman, apprentice), Minnesota; C. H. Griffiths (ordinary seaman, second class), Saratoga.

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All of which is respectfully submitted, by  
Your obedient servant,

EARL ENGLISH,  
*Chief of Bureau.*

Hon. R. W. THOMPSON,  
*Secretary of the Navy, Washington, D. C.*

## REPORT OF THE CHIEF OF THE BUREAU OF NAVIGATION.

BUREAU OF NAVIGATION, NAVY DEPARTMENT,  
*Washington, November 1, 1880.*

SIR: I have the honor to submit the following report of the Bureau of Navigation for the past year, together with the estimates for its support and for the expenditures that will probably be required in that division of the naval service committed to its immediate charge, for the fiscal year ending June 30, 1882. Included in this report, and transmitted herewith, are the reports and estimates of the several offices under its cognizance, and an abstract of offers for supplies received.

### NAVIGATION.

*American Practical Navigator.*—Under section 2 of the act approved June 21, 1866, establishing a Hydrographic Office under this Bureau, the copyright of the New American Practical Navigator, by the late Dr. Nathaniel Bowditch, became the property of the government. Occasional corrections and additions to the tables of latitudes and longitudes have since been made, but the necessity for a complete revision of the book had become more and more apparent in order to introduce the improved methods of navigation of the present day. Under the order of the Bureau, Commander P. H. Cooper has been engaged in this revision since November, 1878, and I am glad to report that he has accomplished the task satisfactorily, and that the manuscript is now in such a forward state as to be soon placed in the hands of the printer.

The chief design has been to eliminate much that is superfluous in the old editions; to introduce more precise and ready methods, such as Chauvenet's Equal Altitudes and Lunar Distances; an explanation of the theory and practice of Sumner's method, which is universally used by navigators of this day; to incorporate the system adopted by the Navy Department for keeping the ship's log and compiling meteorological data for the benefit of science; and to produce improved articles on winds, currents, tides, and practical surveying.

The subject-matter has been so arranged as to admit of ready reference and observations of the same kind grouped in proper sequence, the main object having been to sustain its character as a valuable practical navigator, and also to render it useful as a text book for students of the science of navigation.

*Determinations of longitudes.*—Under your direction I have caused the preliminary arrangements to be made for continuing, next spring, the very important work of determining longitudes by means of the telegraph. The field next to be occupied will be the Asiatic Station, and will comprise the following places: Yokohama, Nagasaki, Shanghai, Amoy, Hong-Kong, Manila, Saigon, and Singapore.

Lieut. Commanders F. M. Green and C. H. Davis, with Lieut. J. A. Norris, who in previous years so successfully accomplished the determination of points on the coasts of America, Europe, and Africa, will be charged with the execution of this duty.

Officers of the British Government are now engaged in measuring, in a similar manner, differences of longitude from the observatory of Madras to Australia, by way of Singapore.

The Department having instructed the commander-in-chief of our naval forces on the Asiatic Station to detail, at the proper time, the United States steamer Palos for service in conveying the longitude parties and their instruments to the various places before mentioned, I have also requested that officer to have her fitted with appliances for sounding and surveying, which are already on the station, in order that she may be enabled to prove or disprove the existence of a number of reported rocks and shoals on the way to and from the ports named.

*Navigation supplies.*—A board of officers is now engaged in revising the allowance list of the navigation outfit of ships-of-war.

There remain from the late war large quantities of obsolete lamps, signaling and sounding apparatus, &c., which the Bureau desires to dispose of, if legislation can be obtained authorizing the use of the proceeds from sales for the purpose of purchasing improved implements.

It has been found that illuminating oil can be furnished from this country to our vessels on the European, South Atlantic, and Pacific Stations, which is superior in quality and cheaper in cost (freight included) than the oil hitherto purchased abroad, thus enabling the Bureau to effect a saving and to foster, in some degree, home production.

The appropriations for the branch of the naval service in charge of this Bureau are barely sufficient for the present naval establishment. With many large vessels in commission, and greater activity among cruisers, training and practice ships, the expenditures have become larger, especially in the matters of oil and pilotage. Many old articles have been made use of by occasional repairs, in order to keep expenditures within the limits of the appropriations made; but the time has come when such articles must be replaced by new ones. I have therefore submitted slightly-increased estimates for the next fiscal year, which it is hoped may receive favorable consideration.

*Simultaneous international meteorological observations.*—The system of taking meteorological observations on board of all naval vessels, at a given moment once each day, which was introduced in 1877 at the instance of the late Brig. Gen. A. J. Myer, Chief Signal Officer of the Army, has been enlarged upon since January, 1880, by taking three such observations daily. As these observations are rendered from all parts of the globe, wherever our vessels may be, they form an important contribution to science, and are highly appreciated by the Chief Signal Officer of the Army, in whose office they are collated and published.

## HYDROGRAPHY.

The efforts of this Bureau have been particularly directed to the examination of doubtful dangers, reported in many cases directly in the highways of commerce. Commanders-in-chief of squadrons have ably seconded these efforts, and officers under their command have carried out occasional instructions with zeal. Prominent among these are Commander A. R. Yates and the officers of the United States steamer *Alliance*; part of the naval force under Rear-Admiral R. H. Wyman, in examining and surveying shoals and doubtful positions off the coast of Newfoundland, and Commander Charles L. Huntington and other officers of the United States steamer *Alert*, part of the naval force under Rear-Admiral T. H. Patterson, in examining and surveying a number of islands and reported shoals south of Yedo Bay, Japan. The results of these surveys will be the removal from charts of obstructions, the fear of which has caused important deviations from direct lines of navigation.

The survey of the west coast of Mexico was interrupted through the breaking down of the boilers of the United States steamer *Tuscarora* in the spring of this year, but under your orders it will be resumed when the United States steamer *Ranger* can be got ready for service. Commander J. W. Philip, who so ably conducted the survey thus far, will continue in charge of it, and, judging from the results already rendered, it will be completed in an eminently satisfactory manner.

Commander L. A. Beardslee and his able assistants, Lieut. F. M. Symonds and Master G. C. Hanus, of the United States ship *Jamestown*, have, during the past year, continued the survey of the channels and islands of Sitka Harbor, and have forwarded very valuable data, which, after making copies for the archives, were transmitted to the office of the United States Coast and Geodetic Survey for publication.

I have the honor to call attention again to the necessity for a systematic examination of the many reported dangers to navigation in the great oceans. I hold that no more useful and creditable service could be performed by naval officers in time of peace. Their academic education, and the valuable experience they derive from temporary service in the Coast and Geodetic Survey, in the Hydrographic Office, and light-house service, fully qualify them for surveying duty, and the very useful work of this kind, as mentioned in this and previous reports, attests their ability to conduct nautical surveys.

I beg leave to refer to that part of the appended report of the Hydrographer that treats of needed surveys in order to improve our charts, and, in furtherance of this object, I would respectfully recommend that vessels be specially assigned for, and continued on, surveying duty, as follows:

1st. That the United States steamer *Ranger*, after carrying out the original instructions for surveying the Pacific coast of Mexico from Cape Corrientes to the Gulf of Fonseca, be directed to extend that survey down to the Gulf of Dulce, and then enter upon the survey of islands, rocks, and shoals in the Pacific Ocean which lie in the track of the westward-bound commerce of the world.

2d. That the United States steamer *Palos*, after the completion of the projected determination of secondary meridians previously referred to, be employed on the Asiatic side of the Pacific Ocean in examining doubtful localities and surveying the Marshall and Caroline Islands.

3d. That the Department may detail a suitable vessel for special service in the Atlantic Ocean, in examining reported rocks and shoals, and in making needed surveys in the West Indies and on the Spanish Main.

Instruments and other necessary surveying and sounding appliances for making occasional surveys by vessels attached to squadrons have hitherto been furnished by the Bureau, without asking for additional means; but the magnitude of the contemplated investigations renders an earnest appeal necessary for the special appropriation asked for the survey of the Pacific Ocean.

#### HYDROGRAPHIC OFFICE.

The very able report of the Hydrographer contains a detailed statement of the operations of this office during the past year, and it is a fine exhibit of the highly successful and economical management of its affairs in all its branches.

The amount of useful work performed in this office, as shown in the report, could not have been rendered on the comparatively small appropriation without the aid of a number of junior naval officers, who find most suitable employment in the divisions of longitudes, archives, meteorology, in preparing sailing directions and hydrographic notices, and in correcting charts.

The funds appropriated annually for this office are principally devoted to the payment of skilled draughtsmen, engravers, plate-printers, and other civil employes, and to the purchase of necessary materials. With a steady increase in the work performed, it has been found that a corresponding increase of the appropriation has become necessary unless the publication of many charts be delayed.

In view of the peculiar nature of the work, and more particularly that of preparing original charts and engraving them on copper, which is a slow process, I would respectfully recommend that Congress be asked not to restrict the appropriations for this office to one fiscal year, but to make them continuous.

#### SIGNALS.

The report of the Chief Signal Officer of the Navy treats of the various subjects referred to him for examination during the last year, among which were the amended regulations for preventing collisions on the water, proposed by the British Government, and a number of designs of fog and steering signal apparatus.

The recommendations for bringing about an international code of sound signals, to indicate courses steered in time of thick and foggy weather, as well as those bearing upon a change in the present signal practice on board naval vessels, deserve consideration.

#### NAVAL OBSERVATORY.

The annual report of the Superintendent of the Naval Observatory, hereto appended, contains statements of the astronomical work performed, of the experiments made in astronomical photography, the work on the solar eclipses of 1878 and 1880, the treatment of Navy chronometers, and a description of the instruments for and the manner of furnishing accurate time-signals throughout the country.

I beg leave to invite your attention to the remark of the Superintendent in regard to the delays in the printing of the annual volumes of observations, which is "so far in arrears of the current work of the Observatory as to be discreditable to the Observatory and to the country," and I would respectfully recommend that, if the appropriations for

printing and binding for the Navy Department are insufficient to complete the work in question, Congress be asked to increase the appropriation, or that special legislation be obtained in order to have the printing of the said volumes completed without further delay.

NAUTICAL ALMANAC.

The Superintendent of the Nautical Almanac reports the number of publications sold and distributed during the fiscal year 1879-'80, the progress made in preparing and printing the annual volumes of the Nautical Almanacs in advance, and in the preparation of improved tables of the positions and motions of the stars and planets; also, the very interesting experiments made during the past year for determining the velocity of light.

Respectfully submitted.

WM. D. WHITING,  
*Chief of Bureau.*

HON. R. W. THOMPSON,  
*Secretary of the Navy.*

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WASHINGTON, D. C., *October 26, 1880.*

SIR: In accordance with the order of the Bureau dated October 23, I have the honor to submit the following report of the operations of the Hydrographic Office for the fiscal year ending June 30, 1880:

I. WORK LEFT UNFINISHED IN THE PREVIOUS FISCAL YEAR IN THE DIVISION OF DRAFTING AND ENGRAVING, IN CHARGE OF MR. E. R. KNOBB.

*General chart of the South Pacific Ocean, in eight half sheets.*—The work of engraving the last sheet has been completed, and on all the sheets additions and corrections have been engraved, to conform with the numerous and extensive surveys, executed by various maritime powers since the compilation of the manuscript sheets. A final comparison and examination is yet required before the chart can be issued.

*General chart of the Indian Ocean, in four half sheets.*—The engraving of these sheets has just been completed. Additions and corrections from late surveys were made on the manuscript as the engraving progressed. The charts will be ready for issue in a very short time.

*General chart of the North Atlantic Ocean, in four half sheets.*—The manuscript for this chart has been completed; also the engraving as far as provided for. The engraving of work additional to that stipulated in the agreements, resulting from an extension of the charts eastward and from additions by new surveys, is rapidly progressing, and the four sheets will be available for issue in a few months.

*Mediterranean Sea, in three sheets.*—The eastern sheet is in the hands of the engraver and will be finished before the close of the fiscal year 1880-'81; of the middle sheet the compilation of the manuscript has been resumed, the results of the recent surveys by the French, Italian, and Spanish Governments having become available; the western sheet, already engraved, is undergoing correction from the same sources.

*Island of Guadaloupe.*—The work of engraving in the office the mountain topography, which has been repeatedly interrupted by the pressure of current work, is still in progress.



*North Sea.*—The engraving in the office of this chart is resumed whenever the nature of current work permits.

*Amazon and Madeira Rivers.*—The plotting of the surveys of the Amazon River from the sea to the mouth of the Madeira River, and thence to the falls of Saint Anthony, made by Commander T. O. Selfridge and the officers of the U. S. S. Enterprise, has been completed, and preparations are in progress for the speedy engraving of a series of sheet charts on an appropriate scale from photographic reductions.

## II. CURRENT WORK AND NEW WORK COMPLETED DURING THE YEAR.

More or less extensive corrections and additions from recent foreign surveys and from other sources have been engraved on 34 plates, and equally important corrections have been made on the manuscript of a number of charts which are yet to be engraved.

Current corrections, such as changing the assigned position of isolated islands and dangers, the placing of reported new dangers, changes in lights, buoys, &c., have been made on 94 plates, some of these plates having been frequently under correction.

The new publications issued during the year are:

*Mona Island, in the Caribbean Sea*, photolithographed from an unpublished Spanish survey.

*Track charts of Nordenskjold's voyage along the north coast of Siberia*, a photolithograph.

*Orchilla Island and Harbor, in the Caribbean Sea*, photolithographed from a sketch furnished by Captain Foulke, a resident of that island.

*Sacannah la Mer Anchorage, on the southwest coast of Jamaica*, photolithographed from a recent British survey.

*Virgin Rocks and Eastern Shoals, on the Banks of Newfoundland*, a sketch of the Eastern Shoals, furnished by the master of the fishing schooner Snow Squall, was photolithographed, but was afterwards withdrawn from issue because of objections by the master of the Snow Squall, who claimed the sketch as his private property, it having been made from his own survey. In place of this an engraved chart of the Virgin Rocks and the shoals in their vicinity (embracing the Eastern Shoals), was published from a recent British survey, to which additions will be made from recent examinations by the U. S. S. Alliance, Commander A. R. Yates.

*Deep-sea soundings* from the following sources have been engraved on the charts affected:

Among the Windward Islands: by the United States Coast and Geodetic Survey.

In the Atlantic Ocean: by the U. S. S. Wachusett, Commander Byron Wilson, and the U. S. S. Saratogo, Commander R. D. Evans; the former disproving the existence of a number of "vigias."

In the Pacific Ocean: by the U. S. S. Tuscarora, Commander J. W. Philip, and by the United States schooner Fenimore Cooper, Lieut. J. M. Brooke, in 1858-'59, but heretofore unpublished.

In the several oceans, from foreign hydrographic surveys.

Important soundings at the mouth of the Rio de la Plata, made by the U. S. S. Essex, Commander W. S. Schley, have been entered upon the special and general charts embracing that locality.

A number of tracings of important manuscript charts and sketches have been made and deposited in the archives of the office for future reference, the most notable being from the valuable surveys of the harbor of Sitka and its approaches, by the officers of the U. S. S. James.

town, Commander L. A. Beardslee, the original records of which were transferred to the United States Coast and Geodetic Survey for publication. From this survey additional tracings were made for the use of several vessels, including the United States revenue cutter Thomas Corwin, sent by the government in search of missing whalers beyond Behring's Straits, the same vessel also being furnished with a number of tracings from Russian charts of ports in those high latitudes.

Aid was extended to several branches of the Navy Department by furnishing them with tracings and drawings for various purposes.

In the Division of Archives, in charge of Lieut. Commander C. H. Black, the publications during the year have been as follows :

List of lights, No. 1, east and west coasts of North and South America, &c.

List of lights, No. 2, south and east coasts of Africa and the East Indies, &c.

List of lights, No. 3, west coast of Africa, Mediterranean Sea, &c.

List of lights, No. 4, Atlantic coast of Europe, &c.

List of lights, No. 5, North, Baltic, and White Seas, &c.

List of lights, No. 6, British Islands.

Eighty-five hydrographic notices.

Two hundred and thirteen notices to mariners.

A complete set of hydrographic notices constitutes 449 pages of printed matter, and of the notices to mariners, 480 pages ; the two sets forming a complete synopsis of the published discoveries or changes in the natural features of the navigable waters of the globe, and of the additions or changes in the artificial aids to navigation occurring during the year. The compilation of this mass of indispensable information, much of it requiring translation from foreign languages, imposes, each year, greater labor and care upon the Hydrographic Office. The work is performed by officers of the Navy assigned to this duty, and it is to a great extent effected through a system of interchange of information and publications between the Hydrographic Offices of the United States, Great Britain, France, Denmark, Sweden, Russia, Spain, Italy, Austria, Holland, Belgium, Germany, Japan, Brazil, Buenos Ayres, and Chili.

This year was inaugurated the plan of publishing quarterly statements of charts, plans, notices, and books, published and canceled during each quarter.

In the Division of Library and Books, in charge of Lieut. Seaton Schroeder, all books of sailing directions have been kept corrected up to date by the insertion of information affecting them from all available sources, largely from hydrographic notices and notices to mariners, published by this office, so that when issued to United States naval vessels, or to vessels of the merchant marine, they contain the latest information at the command of this office. As a rule, volumes of sailing directions issued by foreign hydrographic offices are corrected only to the date of imprint.

During the year there have been 862 volumes of sailing directions sold to authorized hydrographic agents, besides 2,743 publications of all kinds issued to United States naval vessels, to the Coast Survey, revenue marine, and to libraries and foreign hydrographic offices; the latter number including reissues to naval vessels.

The operations of the Chart Division, under Lieut. Commander J. E. Noël, have been as follows :

*Hydrographic Office publications.*—Received from the Hydrographic Office printing room, 5,091 engraved charts and plans. From outside parties (photolithographers), 1,215 protractors—3,733 charts and plans.

Total Hydrographic Office charts, plans, &c., received, 10,039. Issued to vessels of the United States Navy, 3,229; to Mare Island depot, 1,673; to agents, 4,496; to Coast and Geodetic Survey, 225; to Naval Academy, 153; to Treasury Department, 201; to Smithsonian Institution, 62; to United States Army, 103; to Imperial German Admiralty, 695; to Central Hydrographic Office, Buenos Ayres, 701; to Mexican Government, 46; to Brazilian Government, 72; to foreign correspondents, 133; to merchant vessels of various nationalities, in consideration of keeping meteorological journals, 461; to miscellaneous issues, 1,035. Total issues, 14,285.

*Of Coast and Geodetic Survey publications.*—Received, 823; issued to United States Naval vessels, 725; miscellaneous issues, 57.

*Of foreign publications.*—Received of British Admiralty charts, by purchase, 1,446; complimentary copies of British Admiralty and East India charts, 274; Swedish charts (complimentary), 42; total foreign charts and plans received, 1,762. Issued to United States Naval vessels and Treasury Department for revenue marine, 4,462 British Admiralty charts; to Mare Island depot, 2,078 British Admiralty charts; total, 6,540, including reissues.

Printed in Hydrographic Office printing-room, 5,091 Hydrographic Office charts, 761 proofs, 700 publishing notices, 1,200 official labels, 1,300 official envelopes, 250 official seals, 50 compasses, 3½ reams of official heading, 425 compass-deviation diagrams (for the Bureau of Navigation), 1,540 copies of *Nebulæ of Orion* (for Naval Observatory).

There have been withdrawn from issue 23 Hydrographic Office charts, superseded by later surveys.

The force in the chart rooms has been mainly occupied in keeping the supply of charts corrected to the latest dates.

When practicable, charts returned from vessels going out of commission have been corrected and replaced upon the shelves for issue.

Lieut. Commander F. M. Green, in charge of the Division of Longitudes, has been occupied in supervising the compilation and publication of the work of the Telegraphic Longitude Expedition to South America in 1878-'79; in recomputing all observations for latitude and longitude received from United States Naval vessels, and in compiling from original sources a general list of about 4,500 geographical positions of importance to navigation. This list will be published in the course of the coming winter.

In the Meteorological Division, in charge of Lieut. C. H. Judd, compilations for the meteorological charts of the North and South Atlantic Oceans have been continued and are still in progress. Owing to the enlargement of the work a longer time for its completion will be necessary than was anticipated in the Hydrographic report for 1879. The importance of, and necessity for, presenting the results of meteorological observations in a graphic form, instead of a tabulated form, by which their value will be enhanced among practical navigators, the majority of whom are averse to studying new methods or complicated diagrams, is now occupying the attention of this office.

It is gratifying to report that the interest taken by ship-owners, ship-masters, and maritime associations and exchanges in furnishing meteorological information for the office is still unabated, and that the percentage of well-kept journals sent to the office is steadily increasing.

### III.—WORK ENTERED UPON AND STILL IN PROGRESS.

*South Atlantic Ocean general chart.*—The preparation of this chart, conforming in scale and elaboration to the other new general charts of

the several oceans, published by this office, has been taken in hand and arrangements have been made for the engraving, which will be done in parts as the drawing progresses. These general charts are to replace the charts heretofore issued from the plates purchased from E. and G. W. Blunt, which are worn by frequent and extensive corrections, and are obsolete in many respects.

*Channels between the North and Baltic Seas.*—This chart is in process of preparation, but work has been suspended in consequence of insufficient appropriations.

Sailing directions for the West Coast of Mexico, from the United States boundary line to Cape Corrientes, including the Gulf of California, have been compiled by Lieut. Samuel Belden from data by Commander George Dewey, and by other authorities, and the volume is now in the hands of the Public Printer.

A supplement to the first edition of Reported Dangers to Navigation in the North Pacific Ocean, inclusive of the China and Japan Seas and the East Indian Archipelago, has been compiled by Commander William Gibson, from various sources, and is now nearly ready for issue; this supplement contains nearly 500 reported dangers, whose positions are uncertain, and hence are greater obstructions to navigation than if known.

The Hawaiian Government has instituted a connected trigonometrical survey of the entire Hawaiian group of islands, and the government surveyor has kindly forwarded to this office tracings of the triangulation sketches and of the plane-table sheets, as far as they have progressed. A new chart of the southwest coast of Oahu, embracing the harbor and approaches of Honolulu, has been compiled from this source of information and from previous surveys by United States vessels. The engraving of this chart, which is to replace one of less extent of coast, and inferior in other respects, is being done by agreement, and is almost completed.

The survey of the west coast of Mexico, from Mangrove Bluff to the Gulf of Fonseca, has been prosecuted by the officers of the U. S. S. *Tuscarora*, under the direction of Commander J. W. Philip, with great energy and admirable skill. Seven coast charts, embracing about two-thirds of the above specified coast, and fourteen charts of harbors and anchorages, with the records of the survey which have been transmitted to this office, bear evidence of the completeness and correctness of the survey, and supply reliable information for important changes in the meagre charts heretofore used. It is intended to publish the survey of this coast in three sheets, on the same scale on which the surveys of the coasts of Lower California and of the Gulf of California were published, of which it is a continuation.

Since the survey, so far as executed, is not yet altogether continuous, the publication of these coast sheets will be deferred until the survey is complete. The charts of the harbors and anchorages, however, will be published without delay, as some of them have heretofore been unknown and should be at once made available for the numerous vessels plying along this dangerous coast. Preparations are in progress for engraving them from photographic reductions of the original sheets.

#### RECOMMENDATIONS REGARDING NEW SURVEYS.

The commercial development of the age has imposed upon all maritime nations the duty, in their own interest and in that of humanity, of clearing up doubts, fixing the dangers, and lighting up the path of the



mariner in all the commercial thoroughfares of the ocean. It is of late years only that the Government of the United States has begun to add systematically its quota to this important work, and yet its efforts in that direction are not commensurate with the importance of the subject, nor are they in proportion to those of other nations not more interested in hydrographic progress than ourselves. The field of operations is as vast as the subject is important, and recent physical changes, wrought by the skill and energy of man in the interest of progress, as well as those contemplated in the near future, are calculated to impress upon America a sense of what she owes as a nation to the interests of mankind, and especially to the safety and development of her own commerce.

1. It is respectfully recommended that the survey of the west coast of Mexico, at present being so ably conducted under the direction of Commander J. W. Philip, U. S. N., be extended beyond the Gulf of Fonseca, which, in his instructions, is named as the present limit of his work. There are several portions of the coast between that gulf and the Gulf of Dulce which are very imperfectly known, the soundings in some cases being insufficient and in others almost entirely wanting. It is most desirable that the charts between the two above-named points should be verified and the doubtful portions properly surveyed. The importance of the California trade indicates the necessity of completing this indispensable work at an early day.

2. The Spanish Main between the Island of Trinidad and the Isthmus of Panama is represented on our charts mainly from Spanish documents of old date. These charts are imperfect and incorrect, especially in relative position. The chain of astronomical positions established by Commander Ryan, of the U. S. S. *Huron*, in 1877, by order of the Bureau of Navigation, shows differences in latitude as well as of longitude of from three to seven miles. To compile new charts from these data by interpolating coast-lines between established points would invite disaster, as new charts are now accepted with more confidence than formerly since the enlightened leading nations are known to devote a portion of their great resources to ascertaining and mapping out accurately the hidden dangers to navigation which have long caused capital and seamen to shun certain seas. Reliable charts of the Spanish Main, answering the demands of commerce, can only be obtained by a new continuous survey, which the governments bordering thereon are hardly prepared to inaugurate. The United States, being specially interested commercially in the prosecution of this important work, could, with great profit, detail a vessel fitted expressly for surveying to collect the authentic data necessary to perfect the charts of that region.

3. The coasts of South America eastward of Trinidad, extending to the western border of British Guiana and from the eastern border of French Guiana to the mouth of the Amazon, are as yet but little known and generally avoided for the same reasons. There are discrepancies of thirteen miles in the charts of these coasts.

The increasing trade of the Amazon and Madeira Rivers renders it very desirable that the coast approaches to the mouth of the Amazon should be carefully surveyed; as yet they are imperfectly known, and the coast is approached with reluctance and danger by vessels of deep draught. A careful examination of the mouth of this river and of the adjacent sea-coast would result in substantial benefit to commerce by adding to the safety of navigation.

4. The review of the reported dangers in the North Pacific Ocean, published by this office, contains many hundred dangers which require



local examination in order to render navigation near them safe. This great ocean, over which most of the trade of Asia and America is destined to pass, is so intimately connected with the commercial interests of this country that the duty and responsibility of opening up its thoroughfares for navigators would seem to devolve in an especial degree upon the government of the United States.

5. The Marshall and Caroline groups, located in the Western Pacific Ocean between the equator and  $15^{\circ}$  of north latitude, towards the coast of China, and covering roughly an extent of ocean about nine hundred miles in latitude by twelve hundred in longitude, are very imperfectly known and filled with dangers whose position and numbers are uncertain; occasionally information and sketches are sent to this office by venturesome masters of trading or missionary vessels, of apparently safe harbors and passages into the lagoons of the several atolls visited by them and which were unknown previously; this important information cannot be utilized for publication by this office in consequence of many evident faults and inaccuracies.

In examining a chart of the North Pacific Ocean the vast importance of a thorough knowledge of these groups will be immediately manifest. Casting the eye eastward from the Caroline group and examining that part of the ocean lying between the equator and  $20^{\circ}$  of north latitude as far as the American Isthmus, one sees at a glance that this belt, in which are found the northeast trade-winds and currents setting to the westward, is the natural and necessary highway of the great trade which will be stimulated and developed by the completion of an interoceanic canal through Central America, at whatever point it may be located. Vessels bound to Japan, China, the Philippines, and to the East India Archipelago must necessarily take this Broadway of the sea, and just near its western extremity lie the two groups above mentioned, with their thousand rocks and unknown dangers disputing and obstructing the passage of the world's commerce with the distant East. A careful survey of these two groups is a necessary supplement to the construction of the proposed canal, and inseparable from the benefits which commerce and navigation are to experience from its completion. To accurately locate and make known these grave dangers will be the work of several years, and I cannot too urgently invite attention to the necessity for equipping at least two vessels fully prepared for surveying and deep-sea sounding to develop the dangers as well as harbors and shelters which doubtless exist among these islands.

Very respectfully,

J. C. P. DE KRAFFT,  
*Captain United States Navy, and Hydrographer  
to Bureau of Navigation.*

Commodore WM. D. WHITING, U. S. N.,  
*Chief of Bureau of Navigation.*

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NAVY DEPARTMENT, BUREAU OF NAVIGATION,  
OFFICE OF CHIEF SIGNAL OFFICER,  
*Washington, D. C., November 1, 1880.*

SIR: In compliance with the order of the Bureau of Navigation of the 23d ultimo, addressed to this office, I have the honor to submit the following report of the operations of the Signal Office during the past year:

The collection and arrangement of data having reference to previous and existing legislation with regard to regulations for preventing collis-

ions at sea, mentioned in my last yearly report as being carried out in this office, was satisfactorily concluded last winter, resulting in the issue of a very important Navy Department General Order, which enables vessels of our Navy to govern themselves on the high seas in harmony with the present acknowledged precepts of international law in so far as steering and light regulations are concerned.

In the month of January last the Swedish Government submitted to the United States, and at the same time to all the principal maritime powers, a scheme for fog-course signals which has been in use in Swedish waters for over three years, with the request that it be examined and a report be made with regard to its international introduction for use on the high seas. The document was referred to this office, and a favorable report was made with regard to the system; a few modifications in the wording of the proposed regulations being proposed with a view to giving greater scope to inventive talent in the matter of practical application. About the same time, an automatic apparatus for application to steam whistles, the invention of Mr. George E. Fowle, was submitted for examination, and reported upon as being thoroughly practicable and efficient. In view of the fact that the necessity for introducing some system of fog-course signals for use aboard steam vessels is growing more apparent every year, and that the Swedish Government has not only a system of its own, but is constantly endeavoring to bring about the use of an international system. In view also of the fact that there have been three patents issued during the past year to inventors of apparatus for making such signals, and that these inventors each have different codes of signals, that also all of these codes have been equally recommended by the board of supervising inspectors, it is respectfully suggested that, if possible, the Navy Department take such steps as shall lead to a practical test of various systems, with a view to the recommendation of such as shall appear to be the most efficient, in order not only that the Navy may have its share of the honor of introducing a system that is inevitable sooner or later, but that, by its action, vessels within our own waters may be preserved from the dangers arising from the adoption of several systems at the same time. In the present condition of our laws and system of legislation there is nothing to prevent the adoption by different steamboat companies of different systems of course-signals, thus creating confusion and leading to special legislation. The Navy can take the lead in the establishment of a sound system without intrenching upon the authority of other branches of the government, and, at little or no expense, accomplish a very important object of commercial economy.

I take the liberty of renewing a recommendation made in a report on a Wallace electric machine last winter, that officers on duty in foreign squadrons be encouraged in gathering and sending to the Bureau of Navigation information with regard to the use of the electric light in foreign navies; with regard to the machines and lamps, styles of setting up and working, and the signal codes. The electric light is now a necessity in naval warfare. It is carried on the iron clads of England, France, Italy, Russia, and Austria, and in case of war our own ships would need some system introduced at once. Having so many systems from which to copy there is no need of going to a preliminary expense for test; the collection of data by the bureau will render it feasible to introduce a system complete at any time.

I also renew a recommendation made last winter, that the method of signal instruction be so altered as to arrange for the proper instruction of seamen and petty officers in general signals, lookout duty, light-hou-

and buoyage rules, and rules of the road, confining the instruction in Myer's Code to those few who are able to spell correctly and who are quick at learning the system. It seems paradoxical that hours should be spent in teaching men a system of signals whose execution in times of importance is never intrusted to them, while the true naval code that they are required to use on the most vital occasions unaided is left for them to pick up as best they can.

Lieutenant Very's system of night signals is still on trial in the service, a complete system of application to the general signal-book having been devised by the inventor.

Very respectfully, your obedient servant,

C. H. WELLS,

*Commodore and Chief Signal Officer.*

Commodore W. D. WHITING, U. S. N.,

*Chief of Bureau of Navigation.*

UNITED STATES NAVAL OBSERVATORY,

*Washington, November 1, 1880.*

SIR: In compliance with the order of the Bureau of the 23d ultimo, I have the honor to submit a report of the operations of the Naval Observatory for the past year.

THE 26-INCH EQUATORIAL.

This instrument has been in charge of Prof. Asaph Hall, with Prof. Edward S. Holden as assistant until February, 1880, since which time Prof. Edgar Frisby has been the assistant. The instrument is now in good order, and it is in constant use.

The turning of the dome has become difficult, and though some repairs have been made during the year, this is a trouble that has to be continually encountered, and one that causes an annual expense. The driving clock has usually performed well, but it frequently needs repairs, and is a source of much trouble. Mr. Gardner, the instrument maker, has made an important improvement in this clock, by which the shaft of the water-wheel has been relieved of three-fourths of its weight and the bearings changed; and it is hoped that the action of the clock will now be better. This instrument has been employed as in previous years in the observation of satellites, double stars, and nebulae.

THE TRANSIT CIRCLE.

This instrument has been employed during the year under the direction of Prof. J. R. Eastman, who was assisted by Prof. Edward S. Holden since April 1, 1880; Prof. Edgar Frisby until December 10, 1879; Assistant Astronomer A. N. Skinner during the year; Assistant Astronomer H. M. Paul until his resignation July 1, 1880; and Assistant Astronomer H. S. Pritchett until his resignation February 1, 1880. Mr. Miles Rock has been employed as a temporary assistant astronomer since July 1, 1880; and Mr. Wm. C. Winlock has been similarly employed since August 2, 1880. Mr. Winslow Upton has been employed as a computer since July 16, 1880. Lient. E. Longnecker and Lieut. A. H. Vail have been employed in reducing transit circle observations, the former during the year, and the latter since April 23, 1880.

The observations have been confined to—

1. Stars of the American Ephemeris for clock and instrumental corrections.
2. Sun, moon, major and minor planets.
3. Stars whose occultations were observed in connection with observations of the transit of Venus in 1874.
4. Standard stars for a catalogue of zone observations.
5. Such stars of the British Association Catalogue between  $120^{\circ} 0'$  and  $131^{\circ} 10'$  N. P. D. as have not been observed here three times in both right ascension and declination.
6. Stars used in observations of comets, with the 26-inch and 9.6-inch equatorials.
7. Stars used in the determination of latitude by the United States Coast and Geodetic Survey, the Lake Survey, Capt. G. M. Wheeler's survey, and by Lieut. Commander F. M. Green, in surveys in the West Indies.

The whole number of observations made with the transit circle since the last report is 4,140. Of these observations 68 were of the sun, 62 of the moon, 145 of the major planets, and 115 of the minor planets.

The printing of the annual volume for 1876 has been delayed several months by lack of funds, but it is now nearly done. Of the transit circle work, that for 1877 is ready for the printer, the reductions of the 1878 observations are nearly finished, those of 1879 are nearly finished to apparent place, while those of 1880 are as far advanced as the nature of the work will permit.

There is a lamentable lack of funds for printing, and the consequent delay in issuing the annual volume, which is rapidly growing worse every year, will soon reach the point of its being so far in arrears of the current work of the Observatory as to be discreditable to the Observatory and to the country.

#### THE 9.6-INCH EQUATORIAL, ETC.

This instrument is under the direction of Prof. J. R. Eastman, who has the same assistants as on the work with the transit circle. It has been employed in the observations of comets and of occultations of stars, and also in determining the approximate corrections to the ephemerides of such minor planets as are not readily found with the transit circle.

The meteorological department is under the direction of Professor Eastman, and the usual observations, at intervals of three hours, beginning at midnight, have been made throughout the year by the watchmen, Messrs. Hays, Horigan, and Cahill.

The control of the system of wires within the Observatory connected with the central switch-board and of the connections of the wires of the Western Union Telegraph Company is under the direction of the officer in charge of the transit circle, while the immediate charge of all the batteries, wires, and their connections is confided to the instrument maker, Mr. Gardner.

The connections for astronomical work within the building remain substantially the same as during the past year. A new and complete apparatus in connection with a transmitting clock was devised by Professor Eastman in the latter part of 1879, for furnishing accurate time-signals for distribution by the Western Union Telegraph Company, and for dropping the time-ball on the Western Union Telegraph office in New York.

Outside of the Observatory, this department is responsible for the

control, by means of the *motor* clock, of several clocks in the State, War, Navy, and Treasury Departments.

#### ASTRONOMICAL PHOTOGRAPHY.

The experiments in astronomical photography, including the reduction of the photographic observations of the transit of Mercury in May, 1878, are under the charge of Prof. William Harkness, assisted, until June 30, by Master E. F. Qualtrough, and since October 1, 1880, by Mr. Joseph A. Rogers.

At the date of my last report the reductions of the Ann Arbor photographs of the transit of Mercury were suspended, because the reticule plate used in making the pictures had not been returned to this Observatory. Since then the plate has been received, its thickness and refractive index have been determined, and the work of reducing the photographs has made considerable progress. It was expected that the reductions of all the photographic observations of the transit would have been completed some time since, but they have been greatly delayed by the ill health of Mr. Qualtrough and his subsequent assignment to other duties.

An investigation has just been commenced for the purpose of obtaining some light on the following questions, namely:

1st. What are the capabilities of objectives of various sizes for astronomical photography, and what are the approximate exposure coefficients for the different classes of celestial objects?

2d. What form of apparatus is best adapted for photographing the corona during total solar eclipses, and what exposure coefficient is likely to be required?

3d. What kind of pyroxyline is best adapted for astronomical photography, and how can it be produced with certainty?

Much time has been spent in planning these experiments and in devising suitable apparatus for executing them, and it is hoped that they will lead to practical results.

#### SOLAR ECLIPSES OF JULY 29, 1878, AND JANUARY 11, 1880.

The reports on these eclipses have been collected into a volume, the publication of which has been ordered by Congress, and which, it is believed, will be of considerable interest not only to astronomers, but to the public at large. The volume is a quarto, containing 437 pages of text, 35 woodcuts, and 30 lithographic plates. Carrying it through the press, supervising the production of the illustrations, and preparing the indexes and table of contents, have occupied much of Professor Harkness's time during the last six months. The volume was stereotyped some weeks ago, but the printing was not completed until October 23. The cause of this delay was the impossibility of procuring paper, the mills which supply the Government Printing Office being all stopped for want of water by the long-continued drought.

The first part of the "Transit of Venus Papers," embracing the history and general discussion, is in the hands of the printer, and the composition is about complete. The presswork was, however, postponed on account of the incomplete state of the general reduction of the observations to appear in Part II. These reductions cannot be completed without a small additional appropriation for the purpose, the recommendation for which is herewith submitted.



## THE LIBRARY.

The library contains 8,500 volumes, distributed about as follows:

I. Works on astronomy, mathematics, geodesy, physics, meteorology, and geography, including transactions of learned societies, about 6,200 volumes.

II. Pamphlets on the same subjects, each one separately bound in paper covers, placed in drawers and classified by subjects, about 1,000 numbers.

III. Miscellaneous works of reference, etc., in the office of the Superintendent, about 700 volumes.

IV. Publications of the United States Senate and House of Representatives, about 600 volumes.

Total, 8,500 volumes.

The works named under "I" are placed in a room which formerly was used as the observing room of the meridian circle, and in the open hallways leading from this. Those under "II" stand in cases in the halls leading east; and those under "IV" are in wooden closets in the second story of the building. In each case the danger from fire is very great. The money value of these works is not less than \$15,000, and many of them could not be replaced if once lost by fire.

A card catalogue of about 16,000 cards has been completed. It is not necessary to print this at present. After the cards become soiled by use, they should be printed, to preserve them.

The library is under the charge of Prof. Edward S. Holden. He has been assisted by Lient. T. Dix Bolles to July, 1880, and since that date by Master E. F. Qualtrough.

## DISTRIBUTION OF THE PUBLICATIONS OF THE OBSERVATORY.

A list of 921 names has been prepared, and to these correspondents our publications are distributed. Academies of science, public observatories, and the principal colleges and libraries receive the complete volume. The appendices are distributed to all observatories, to the principal astronomers, and to others interested in astronomy. In return for this liberal distribution, the library receives, free of cost, the publications of the principal observatories, learned societies, etc., of the world.

Since February, 1879, about 12,000 separate numbers of our publications have been distributed. These were mostly to fill sets which had been left incomplete in former distributions. At present all our correspondents have complete sets of our volumes, as far as we can supply them.

In addition to his duties as librarian, Professor Holden takes his regular tour of duty as an observer on the transit circle; and he has made a set of drawings of the planets Saturn and Jupiter with the 26-inch equatorial, and a series of measures of the dusky ring of Saturn, in continuation of that made in 1879.

\* \* \* \* \*

The Observatory is in need of some means of producing extreme temperatures for the trial of chronometers; at present having to rely entirely upon atmospheric changes to give the necessary trial at different temperatures. Applications are made frequently by inventors to test chronometers for extreme temperatures; so it is for the country, as well as the Navy, that such tests are needed.

The time department is responsible for furnishing accurate time-signals throughout the country, for dropping the Western Union time-ball in New York and the time-ball at this Observatory.

A transit of Venus clock has been fitted as an automatic transmitter, the work of Professor Eastman and Mr. Gardner. It has been placed in the chronometer room to send off time, in lieu of the old method of sending it by hand; thus doing away with personal errors, and making the time-signals almost absolutely correct.

There are small errors in time due to the changes in thermometer and barometer. The standard clock is continually corrected by observations of the heavenly bodies; but there are considerable periods of time in which no observations can be taken. During this time the clock may vary slightly—say a second, or in extreme cases even two seconds; but the error seems inherent to human workmanship.

The transmitter is an ordinary astronomical clock, face marked from 0 to 24 hours. On the seconds' wheel arbor is an extra wheel, the teeth of which are beveled, and the 29th, 55th, 56th, 57th, 58th, and 59th teeth are omitted. Opposite the place of the 60th tooth, on the inner side, is a pin projecting horizontally from the wheel for a short distance, and a similar pin is opposite the 49th tooth, but projecting from the outer side. The former is for giving our own noon signal, while the latter gives the New York noon signal. The immediate electrical connections, with the repeater on the top of the clock, are made by means of three small and delicate springs, descending from the top of the clock frame, all in the same plane, which is at right angles with that of the wheel and nearly tangent to it. Behind each spring (a small interval between) a brass piece descends of the same size and shape as the spring, and in the end of each is screwed a small platinum disk, against which the platinum point on the end of the spring rests and closes circuit. As the wheel revolves, the teeth strike against a jewel on the middle spring, which breaks the circuit through the main line. By shifting switches at side of clock, the circuit is changed to the outer and inner springs, the pins in the wheel striking the jewels at the moments of New York and Washington noon.

For 3<sup>m</sup> 15<sup>s</sup> before each noon seconds' beats are sent out by the clock; and by the omission of the 29th and last five seconds of each minute, comparisons can be easily made at any point on the line.

At first the comparisons and corrections of the transmitter with the mean-time standard were made by ear and hand, which method of course was liable to the error arising from the operator's personal equation.

Various plans have been tried for doing away with those errors; but finally both clocks were connected with a chronograph which gave us the desired result, and we are now able to set the transmitter within less than a tenth of a second of the correct time as shown by mean-time standard clock.

During the year the Western Union time-ball in New York failed nine times—once on account of a heavy snow-storm; four times owing to interruption to the Western Union lines; and four times owing to accidents to machinery. The Washington time-ball failed twice, owing to accidents to machinery.

Very respectfully, your obedient servant,

JOHN RODGERS,  
*Rear-Admiral, Superintendent.*

Commodore WM. D. WHITING, U. S. N.,  
*Chief of Bureau of Navigation, Navy Department.*

NAUTICAL ALMANAC OFFICE,  
BUREAU OF NAVIGATION,  
*Washington, D. C., October 26, 1880.*

SIR: I have the honor to submit the following report of the operations of this office during the past year.

The large Ephemeris for 1882 was issued in December, 1879. The American Nautical Almanac for the year 1883, containing that portion of the Ephemeris necessary for navigators, was issued in May last. The printing of the large Ephemeris for 1883 is now complete and the first edition is in the hands of the binder. Of the Ephemeris for 1884 161 pages are now in type.

During the fiscal year ending June 30, 1880, 659 copies of the large Ephemeris were sold, and 862 copies were distributed for the public service and for scientific and educational purposes. Of the Navigators' Almanac, 3,359 copies were sold.

The computations for the year 1884 have been completed with the appropriation for the last fiscal year, except the fixed stars and some small pieces of office work. The computations for 1885 are now in progress, and their completion is expected during the present fiscal year. It is necessary to have the computations finished some time in advance of going to press, in order to afford time for their comparison and examination.

IMPROVEMENT OF THE TABLES.

Researches having for their object a more accurate determination of the constants of astronomy and of the elements of the celestial motions form that part of the work of the office which is of most scientific interest. The ultimate object of these researches is the preparation of improved tables of the positions and motions of the stars and planets. Although the existing tables are sufficiently accurate for the purposes of the navigator, they do not supply the astronomer with all the data necessary for the accurate determination of geographical positions, and are indeed behind the age in nearly every respect. It may be remarked in this connection that the improvements already made have been promptly adopted by the leading astronomical ephemerides of the world. The following researches of this class have been in progress during the year:

Mr. Hill's work on the perturbations of Jupiter and Saturn has occupied him during the greater part of the year, but another year will still be required for its completion. Mr. Hill has also nearly completed an improvement in Gauss's method of computing the secular variations of the orbits of the planets, and has applied it to a redetermination of the motion of the perihelion of Mercury. His results entirely confirm those of Le Verrier.

The general catalogue of standard stars was completed in June last by Master Chauncey Thomas, U. S. N., and is now in the hands of the printer.

The computation of places of the moon from Hansen's tables for the purpose of comparing with observations since 1750 has been continued during the year, but a larger computing force is necessary to its speedy completion.

The work of correcting the theory of Mercury has been fairly commenced. All the observed transits of that planet have been recomputed and the tables necessary for comparing meridian observations are in progress.

## VELOCITY OF LIGHT.

The phototachometer constructed by Messrs. Alvan Clark & Sons, at the expense of the appropriation for determining the velocity of light was received in May last. Under authority from the honorable Secretary of War the signal station at Fort Whipple was chosen for the mounting of the instrument. The reflecting mirror was, by permission of the Superintendent of the Naval Observatory, located in the grounds of that institution. The distance between the two points is 2,550 meters. About one hundred determinations of the deflection of the image with different velocities have been made. Their agreement is all that could be expected, the average discordance being only  $\frac{1}{4000}$  part of the measured deviation. Two determinations are still required for their final reduction, namely, the accurate distance between the stations, and the angular distance of the divisions on the limb of the instrument with which the deviations were measured. The Superintendent of the Coast Survey has courteously agreed to make the first determination. The second has offered greater difficulties than were expected, and a sufficiently accurate value has not yet been obtained. I hope, however, that by an improved method, about to be put into operation, success will soon be reached.

Although the determination now made will be amply sufficient for all the purposes of astronomy it is desirable in the interest of physical science that this important constant should be fixed with all attainable precision. As the apparatus now in use is believed to exceed in perfection any other heretofore made, it is contemplated to mount the reflecting mirror at a more distant station than the Observatory, and make a second series of experiments.

The determination of the velocity of light made at the Naval Academy, in 1879 by Master A. A. Michelson, U. S. N., which was referred by the honorable Secretary of the Navy to this office, has been printed, and is now in distribution.

Very respectfully, your obedient servant,

SIMON NEWCOMB,  
*Professor United States Navy,  
Superintendent Nautical Almanac.*

Commodore WM. D. WHITING, U. S. N.,  
*Chief of the Bureau of Navigation, Navy Department.*

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REPORT OF THE CHIEF OF THE BUREAU OF YARDS AND DOCKS.

BUREAU OF YARDS AND DOCKS,  
NAVY DEPARTMENT,  
*Washington, D. C., October 21, 1880.*

SIR: In compliance with your order of August 11 last, I have the honor to submit herewith my annual report for the fiscal year ending June 30, 1880, and estimates for the fiscal year ending June 30, 1882, together with an abstract of offers for supplies coming under the cognizance of the Bureau of Yards and Docks for the fiscal year ending June 30, 1880.

I am, very respectfully, your obedient servant,

R. L. LAW,  
*Chief of Bureau.*

Hon. R. W. THOMPSON,  
*Secretary of the Navy, Washington, D. C.*

BUREAU OF YARDS AND DOCKS,  
NAVY DEPARTMENT,  
*Washington, D. C., October 19, 1880.*

**SIR:** In obedience to your order of the 11th of August last, I have the honor to submit the annual report of this bureau, with the expenditures for the fiscal year ending June 30, 1880, and estimates for the fiscal year ending June 30, 1882.

For the support of the bureau during the fiscal year ending June 30, 1880, the only appropriation for improvements was a very inadequate sum for progress on the stone dry-dock building at Mare Island. The other amounts appropriated were for "repairs and preservation," for "general maintenance" and contingencies at yards and stations, and for the support and maintenance of the Naval Asylum.

The amount allotted to Mare Island dock has been expended with utmost care and economy, and the progress made has been very satisfactory, considering the small amount appropriated for the purpose. Proper care and attention have been bestowed upon the various and numerous buildings, docks, wharves, roads, fences, walks, &c., and, where necessary, such repairs were made as the extent of funds allotted would permit.

The bureau is pleased to report that the yards on the Atlantic coast present a very marked improvement in appearance in the last year. Grading, sewerage, and paving have been done as far as means in hand would permit, and not only the appearance of the yards, but the health of the residents and employés has been greatly improved.

The rapid filling in of the approaches by water to some of the yards is a source of much anxiety to the bureau, especially in case of the Brooklyn yard. The sewage from quite a large area of the city discharges into the Wallabout Bay, and renders dredging frequently necessary. The channel is much obstructed at this time, and preparations are now being made to put the dredging-machines in operation.

The amount appropriated for "repairs and preservation" is entirely insufficient to meet the many demands upon it and preserve the large number of buildings, docks, wharves, and other works of improvement in a proper state of efficiency. Many of the large and expensive buildings are necessarily suffering for the want of extensive repairs, which the bureau has not the funds to make, and is therefore compelled to apply such temporary and partial repairs as its means will afford.

During the late war necessity compelled the erection of a large number of temporary frame buildings, most of which have since been removed, but still many remain, and it is the desire of the department that they should be demolished as soon as possible. The bad policy of constructing others, or suffering those in existence to remain, is perfectly obvious; they are disgraceful in appearance, and endanger much valuable property in their vicinity.

The remarks under the heads of the various yards and stations will explain their several conditions and wants, and in submitting these estimates the bureau has endeavored to confine them to as small an amount as a due regard to the interests of the Navy will permit.

PORTSMOUTH, N. H.

I submit estimates for the following objects of improvement at this navy-yard for the fiscal year ending June 30, 1882 :

For water-works .....	\$5,000 00
For yards and docks workshops .....	16,000 00
<b>Total .....</b>	<b>21,000 00</b>



On Scavey's Island there are a number of copious springs which afford an abundance of excellent water, and additional pipes are very necessary for its proper distribution.

This bureau has no proper and convenient workshops at this yard, most of its shop-work being done in old dilapidated buildings, where work is done under great disadvantages; new and suitable shops are much needed.

FOR BOSTON, MASS.

For water-pipes .....	\$20,000 00
For paving and grading .....	5,000 00
For dry-dock gate .....	31,883 75
For repairs to rope-walk .....	20,000 00
Total .....	<u>76,883 75</u>

Many of the water-pipes are in very bad condition and require renewing and a large extension to supply parts of the yard not heretofore provided for; the bad condition of these pipes occasions a great loss of water, and the appropriation is much needed.

The amount asked for under the head of paving and grading is necessary for repairing and extending roads; the transportation of materials is a large item of expense, and unless the roads are kept in good condition, transportation at times is difficult and very expensive.

A new gate for the dry-dock is an object of first importance; the turning-gates have been condemned, and our only reliance is upon the floating-gate, which has now been in use more than forty-seven years, and is much decayed and becoming dangerous. Should it fail with a ship in dock, the consequences may and probably would be very disastrous both in life and treasure, besides depriving the department of the means of docking a vessel.

The appropriation for repairs of rope-walk is very necessary to replace the money drawn from the yearly allotment to repair damages sustained by recent fire. It is the only rope-walk we have, and it is of the utmost importance that it should be kept in good running order. The fire resulted in the loss of about \$25,000. An investigation was ordered, and it seems to be pretty well established that the fire was the act of incendiaries, as there were circumstances which plainly indicated such to be the fact. From evidence elicited, suspicion rests strongly upon certain parties, and the investigation will be pursued until it is hoped the culprits will be discovered and brought to justice.

FOR NEW YORK N. Y.

For repairs to cob-dock .....	\$50,000 00
For dredging .....	20,000 00
Total .....	<u>70,000 00</u>

The cob-dock is in a very dilapidated condition, and extensive repairs are much needed. This dock is an important part of the yard. It has upon it the ordnance dock, and affords convenient storage for boilers, timbers, &c., and timely repairs are greatly needed.

The channel in front of the yard has become so shoal that it is with great difficulty that vessels of a moderate size can obtain access to the dry-dock, and unless a large amount of dredging is promptly done it will be impossible to haul vessels into the dock or under the derrick for masting them. This object is one of imperative necessity, and unless a liberal appropriation is made the usefulness of the yard will be seriously impaired.

## FOR LEAGUE ISLAND, PA.

For dredging and filling in.....	\$25,000 00
For improvement of dikes.....	40,000 00
For stable, wagon and fire-engine houses.....	20,000 00
Total .....	85,000 00

A large amount of dredging and filling is necessary at this yard before any very considerable portion of the area can be made available for naval purposes, and much time must elapse before the filling can be sufficiently consolidated to be suitable for building purposes. It is therefore necessary that this work should be done as soon as possible. Around this island is a very extensive line of dikes to exclude the water from the island, and they require constant watchfulness and care and frequent and timely repairs to prevent inundations from the river in times of freshets.

Proper and suitable stables for the government cattle and horses, and storage for wagons, carts, and fire-engines, are much needed for the safe-keeping of these indispensable objects.

## FOR WASHINGTON, D. C.

For purchase of square No. 853 .....	\$12,604 70
For dredging channels .....	20,000 00
Total .....	32,604 70

Estimates have been submitted for several years past for the purchase of square No. 853, as an extension of the yard. This addition would be a valuable acquisition, while the expenses will be comparatively small.

In recent years considerable amounts have been appropriated by Congress for the improvement of the Potomac channels by dredging. These sums have been expended upon the channel between Georgetown and Alexandria and in front of the city; but nothing has been done towards maintaining the channel of the Eastern Branch, and that channel has now become so obstructed by deposits that government vessels now find great difficulty in obtaining ingress and egress to and from the navy-yard, and it is a matter of serious consequence that something should be promptly done towards the improvement of this channel. The department has an excellent dredging-machine, but no funds to put it in operation, and an appropriation for the purpose is regarded of the utmost importance to secure the usefulness of the navy-yard.

## FOR NORFOLK, VA.

For water-works .....	\$4,000 00
For two cisterns.....	9,832 60
Total .....	13,832 60

The amount of the estimates submitted for this yard is small, but the objects are all of importance, and will do much to promote the efficiency of the yard.

## FOR MARE ISLAND, CAL.

For continuation of stone dry-dock.....	\$200,000 00
For completing iron plating shop.....	5,000 00
For roads and stone pavements.....	5,000 00
For repairing roads and stone pavements and plank roads.....	5,000 00
For extension of timber shed.....	5,000 00
For repairs of seven sections of floating-dock.....	30,000 00
Total .....	250,000 00

A liberal appropriation for the continuation of work on the stone dry-dock is of most urgent and pressing necessity. The coffer-dam has now

been built about seven years, and the materials of which it is constructed are of a perishable nature and now show unmistakable evidences of decay; the excavation is now fast approaching the dam and cannot be much further advanced with safety unless the department is supplied with funds to enable it to secure the entrance as rapidly as possible to guard against accident.

A large amount of money has been expended, and the work is well done thus far, but if it is delayed much longer, from want of means to prosecute it with vigor, serious apprehensions are felt that by a failure of this dam what has already been accomplished may be lost and much valuable property and life sacrificed.

The iron plating shop is nearly completed, but a small additional appropriation is necessary to finish the internal arrangements before the building can be usefully employed.

The soil at this yard is of such character that during the rainy season the roads become almost impassable for heavy hauling, and good roads are of the first necessity, and well-constructed stone pavements will, in the end, be much cheaper than those of a more temporary character.

A large quantity of valuable timber is exposed to the weather, and much loss is sustained from deterioration. Additional timber sheds are much needed for the protection of this valuable and costly material.

The floating dry-dock, the only means which we have of obtaining access to the bottoms of vessels at this yard, is in a very decayed condition and requires extensive repairs, and the estimate submitted for the repairs of this important object is of very urgent and pressing necessity.

#### FOR NAVAL ASYLUM, PHILADELPHIA, PA.

On the 1st of July, 1879, there were 14 officers, 30 attendants, and 165 beneficiaries on the rolls of the asylum. During the fiscal year ending June 30, 1880, 33 beneficiaries have been admitted, 14 have died, 1 has been dismissed for misconduct, 1 discharged at his own request, and 2 dropped from the rolls for absence without leave.

During the fiscal year the usual attention has been bestowed upon the inmates, and everything necessary and proper has been done to render their condition as comfortable as possible. As a general rule, the conduct of the beneficiaries has been good, and they appear to be contented and comfortable.

The expenditures during the fiscal year ending June 30, 1880, have been:

For pay and pocket-money of beneficiaries .....	\$3,817 99
For tobacco .....	1,160 25
For clothing, boots, and shoes .....	7,169 70
For subsistence .....	19,565 68
For paints, dry goods, lumber, wood, and coal .....	4,920 35
For pay of employés .....	8,012 98
For repairs of all kinds, water rent, gas, improvement of grounds, &c. ....	7,192 47

Total ..... 51,839 42

Estimates have been submitted by the governor of the institution for its support during the fiscal year ending June 30, 1882, amounting in the aggregate to \$88,897, which the bureau has reduced to \$59,813.

#### REPAIRS AND PRESERVATION.

The amount appropriated for this object for several years past has been entirely inadequate to keep the large number of buildings, docks, and other improvements in a proper condition, and consequently a number of costly buildings have necessarily suffered for want of timely re-

pairs. The bureau, therefore, has made a small increase to the amount heretofore appropriated, and earnestly requests that it may be granted:

GENERAL MAINTENANCE.

The same remarks as above apply equally to the appropriation under the above head; there are many objects to be provided for out of this allotment, and the demands upon it are very numerous and pressing, and the bureau has made a small addition to the amount usually appropriated, and trusts it will be granted.

CONTINGENT.

The amount asked for under this head is to defray the expense of unforeseen casualties which may occur at the various yards, and its expenditure is always carefully guarded.

Accompanying this report is an abstract of offers for supplies received for furnishing articles coming under the cognizance of the Bureau of Yards and Docks, made in conformity to act of Congress approved March 3, 1843.

The following estimates for the fiscal year ending June 30, 1882, are respectfully submitted :

Sheet No. 1.—For support of Bureau of Yards and Docks.....	\$13,360 00
Sheet No. 2.—For general maintenance.....	450,000 00
Sheet No. 2.—For contingent expenses.....	20,000 00
Sheet No. 3.—For support of Naval Asylum.....	59,813 00
Sheet No. 4.—For repairs and preservation.....	325,000 00
Sheet No. 5.—For improvements at navy-yards.....	549,321 05
Sheet No. 6.—For civil establishment.....	43,018 25
Total.....	1,460,512 30

I am, very respectfully, your obedient servant,

R. L. LAW,  
Chief of Bureau.

Hon. R. W. THOMPSON,  
Secretary of the Navy, Washington, D. C.

No. 1.—Report of expenditures at navy-yards and stations and Naval Asylum for the fiscal year ending June 30, 1880.

Yards and stations.	Appropriations.					Total.
	Yard improve-ments.	Repairs and preservation.	General main-tenance.	Civil establish-ment.	Contingent.	
Portsmouth, N. H.....		\$27,702 31	\$41,805 68	\$3,717 25		\$73,225 24
Boston, Mass.....	\$19,997 29	50,280 55	57,065 81	3,717 00		131,060 65
New London, Conn.....		2,122 08	5,033 32	1,017 25		8,172 65
New York, N. Y.....		42,958 66	84,569 49	5,428 02		132,956 17
League Island, Pa.....		29,884 75	49,974 65	6,221 25	\$7,394 00	93,474 65
Washington, D. C.....		32,726 23	50,658 73	3,674 86	1,484 70	88,544 52
Norfolk, Va.....		50,069 64	59,220 16	4,656 25		113,946 05
Pensacola, Fla.....		15,168 49	26,107 04	2,417 25		43,692 78
Mare Island, Cal.....	74,909 86	55,499 04	59,999 86	6,221 25	5,000 00	201,720 01
Sacket's Harbor, N. Y.....			805 30			805 30
Key West, Fla.....		7,711 65	2,083 90			9,795 55
Naval Asylum, Pa.....	51,839 42					51,839 42
Wharf at Erie, Pa.....					367 00	367 00
Total.....	146,836 57	314,123 40	437,323 94	37,070 38	14,245 70	949,599 99

# REPORT OF THE CHIEF OF THE BUREAU OF STEAM ENGINEERING.

NAVY DEPARTMENT,  
BUREAU OF STEAM ENGINEERING,  
*Washington, November 1, 1880.*

SIR: In obedience to your order, I have the honor to submit to the department the annual report of this bureau.

By act of Congress approved February 14, 1879, there was appropriated for Bureau of Steam Engineering for the fiscal year ending June 30, 1880, \$800,000, which amount has been expended as follows, viz:

Labor in navy-yards and stations in constructing new engines, boilers, and their dependencies; repairing old boilers, machinery, &c., and fitting vessels for sea-service; preservation of tools, handling and preservation of materials and stores.....	\$452,807 00
Purchase of materials, stores, machine-tools, freights, and incidental expenses.....	316,101 90
Payments made on foreign stations for repairs, materials, &c.....	34,758 32
Total.....	803,667 22
Less payment by transfers in adjustment of appropriations.....	9,653 84
Total actual expenditure.....	794,013 38
Balance on hand November 1, 1880.....	5,986 62
Total amount appropriated for 1879-'80.....	800,000 00

The balance of \$5,986.62, however, is covered by obligations of the bureau for purchases, &c., at home and abroad, the vouchers for which have not yet been received, or the accounts not yet settled.

The following amount has been paid from the deficiency appropriation act dated June 14, 1878, in addition to amounts exhibited in my last annual report, viz:

To John Roach.....	\$13,890 00
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The following amounts have been carried to the "surplus fund," United States Treasury, viz:

Benner & Pinckney.....	\$0 45
Eastern Railroad Company.....	11 90
Old Dominion Steamship Company.....	2 32
Philadelphia and New York Steam Navigation Company.....	2 12
Pratt & Whitney Company.....	1,274 78
Quintard Iron Works.....	301 66
American Tube Works.....	4,820 57
Providence Steam Engine Company.....	20,325 35
John Roach.....	117 09
Total.....	26,856 24

There yet remains to be paid from the above appropriation for work not yet completed, or accounts not yet settled, the following sums, viz:

To Harlan & Hollingsworth Company.....	\$12,831 68
To William Cramp & Sons.....	22,850 00
Total to be paid.....	35,731 68

## GENERAL OPERATIONS OF THE BUREAU.

The following will exhibit the extent and character of the work done under cognizance of this bureau, since my last report, upon the machinery and boilers of naval steamers.



*Adams* (3d rate).—General overhauling and repair of engines, &c., completed at Mare Island. Ship in commission.

*Alliance* (3d rate).—General overhauling and repair of engines, &c., at Norfolk yard. Ship in commission.

*Ashuelot* (3d rate).—General overhauling and repairs completed at Shanghai, China. Ship in commission.

*Brooklyn* (2d rate).—Extensive repairs to machinery, including a new crank-shaft, with new boilers put on board, have been nearly completed at the New York navy-yard. A new stern-bearing, and a new four-bladed screw-propeller, of bureau design, has been fitted.

*Canandaigua* (2d rate).—Machinery, boilers, &c., being removed and stored at Norfolk navy-yard.

*Despatch* (4th rate).—New boilers were constructed and put on board at the Washington navy-yard; the machinery thoroughly overhauled and repaired, and a new four-bladed screw-propeller, of bureau design, fitted.

*Enterprise* (3d rate).—New boilers, of bureau design, are being constructed at the Washington navy-yard, and machinery, &c., being thoroughly overhauled and repaired.

*Essex* (3d rate).—General overhauling and repairs nearly completed at the League Island navy-yard. New boilers for this ship, of bureau design, have been put in hand at the New York navy-yard, and the material for same delivered.

*Fortune* (tug).—Engines being repaired at Norfolk yard. New boilers, of bureau design, are being constructed for this tug at Washington yard.

*Galena* (3d rate).—New engines, boilers, &c., of the compound type, have been completed, erected in the vessel, and satisfactorily tested at the Norfolk navy-yard. Ship in commission.

*Hartford* (2d rate).—Work at Boston navy-yard in adapting and erecting on board this vessel a pair of 60 x 36 engines, and placing new boilers, is well underway and progressing favorably. A new stern-bearing, and a screw-propeller, of bureau design, is to be fitted.

*Iroquois* (3d rate).—Extensive repairs to machinery have been commenced at the Mare Island navy-yard, and new boilers, of bureau design, are under way.

*Lackawanna* (2d rate).—General repairs have been completed at the Mare Island navy-yard, and ship in commission.

*Lancaster* (2d rate).—Work is well advanced at the Portsmouth, N. H., navy-yard, in taking out the old engines and boilers and erecting on board new 60 x 36 inch engines with new boilers.

*Mohican* (3d rate).—Parts of new engines have been completed at the Washington navy-yard and shipped to Mare Island. New boilers, designed by the bureau, are being completed at the Mare Island navy-yard and will be ready for service by the time the ship is prepared to receive them.

*Nina* (tug).—Has been thoroughly overhauled and repaired at the New York navy-yard.

*Pensacola* (2d rate).—Machinery has been thoroughly overhauled and repaired at the Mare Island navy-yard, and the vessel furnished with a new screw-propeller, of bureau design, and a new crank-shaft.

*Pilgrim* (tug).—Machinery has been overhauled and repaired at the League Island navy-yard.

*Pinta* (tug).—Is being thoroughly repaired at the Norfolk navy-yard. New boilers are to be constructed at the Washington navy-yard for this tug.

*Plymouth* (2d rate).—General overhauling and repairs of machinery have been completed at the Boston navy-yard.

*Powhatan* (2d rate).—General overhauling and repairs have been completed at the Norfolk navy-yard. Ship is in commission.

*Ranger* (3d rate).—General overhauling and repairs of machinery, including new boilers of bureau design, are nearly completed at Mare Island navy-yard.

*Snowdrop* (tug).—New boilers, of bureau design, are being completed at the Norfolk navy-yard.

*Tallapoosa* (4th rate).—New boilers of bureau design, are nearly completed, to be put in the vessel at the Washington navy-yard, with general repairs of machinery. Ship in commission.

*Triana* (tug).—General repairs have been completed at the New York navy-yard.

*Vandalia* (2d rate).—General overhauling and repairs of machinery have been completed at the New York navy-yard. Ship is in commission.

*Yantic* (3d rate).—Work of placing new boilers, with alterations and repairs of machinery, &c., has been completed at the Washington navy-yard. A new screw propeller, of bureau design, has been put on. The steam trial showed a marked improvement in the efficiency of the machinery. Ship is in commission.

#### NAVY-YARDS.

The departments under cognizance of this bureau at the several navy-yards, under their present organization and equipment, are in good working condition; but, in order to work the very large boiler-plates which the bureau is now using for the new boilers, some heavier tools are required at the several navy-yards, for which at least \$150,000 should be appropriated, and which is not included in our regular estimates herewith.

The stores and materials under cognizance of this bureau have been very carefully overhauled, examined, and inventoried, and full and accurate information is now on file concerning the same.

From these inventories, it is found that stores, materials, machinery, &c., which cost \$326,863.25 (war prices) are on hand for which there does not seem to be any present or prospective use they being of old and obsolete pattern and use, and the most of which are unfit for issue because of deterioration. And it is recommended that Congress be requested to pass an act permitting them to be sold from time to time at public auction, and the proceeds used in the purchase of new material, the construction of new machinery or repairs as required and the best interests of the service shall seem to demand.

#### WORK REQUIRED.

Work required to be done to engines, &c., of United States naval vessels to fit them for sea service (exclusive of what will probably be done under appropriation 1880-'81):

*Alert*.—Should have engines, &c., overhauled and new boilers substituted. New boilers have been put in hand at Mare Island navy-yard and material for same delivered.

*Benicia*.—Repairs to engines, &c., completed and new boilers to be constructed and placed on board.

*Canandaigua*.—Engines thoroughly overhauled and re-erected on the vessels; new boilers constructed and placed on board.

*Colorado*.—In service as receiving-ship at New York yard. Requires new boilers and crank-shaft (on hand) to be put in and machinery thoroughly overhauled and repaired.

*Dictator*.—Engines put in condition for service and new boilers constructed and put in.

*Essex*.—New boilers to be built and put on board at the New York navy-yard.

*Franklin*.—In service at the Norfolk navy-yard as receiving ship. Requires new boilers (now on hand) to be put in and machinery thoroughly overhauled and repaired.

*Hartford*.—Complete engines, place new boilers on board, &c. Fit new screw-propeller.

*Iroquois*.—Complete extensive repairs to machinery. Complete and put in new boilers. Fit new screw-propeller.

*Juniata*.—Thorough repairs to the machinery. New boilers already completed to be placed in the ship. New four-bladed screw-propeller, of bureau design, and new crank-shaft put on.

*Lancaster*.—To complete work in putting in new machinery, boilers, &c.

*Mohican*.—Continue work on new compound engines, &c.

*Monongahela*.—New boilers, with thorough overhauling of machinery.

*Michigan*.—Should have new boilers.

*New York*.—Complete machinery ready for service. Make new boilers and place on board.

*Omaha*.—General overhauling and repair of machinery, and place new boilers (on hand) on board.

*Tallapoosa*.—New boilers to be placed and connected on board vessel, and machinery overhauled and repaired.

*Ticonderoga*.—Should have new boilers constructed and put in with general repair of machinery.

*Tuscarora*.—General overhauling and repairs of engines. New boilers, for which material is being delivered, to be made and put in.

*Wyoming*.—General overhauling and repairs of machinery, &c. New boilers constructed and placed on board.

#### DOUBLE-TURRETED MONITORS.

In this connection I would respectfully renew the recommendations made under date of February 13, 1879, and of my last annual report, as follows:

It will require from eighteen months to two years to build and erect on board, complete and ready for steaming, the motive power of these vessels, while but a few months will be called for, in case of emergency, to put on board the turrets now on hand, and to supply the armature. If the machinery was completed, the vessels could be steamed to the navy-yard nearest the point of their construction, and put under our care and control, ready in the engineering department for immediate service.

I would therefore, in view of what I have stated in the foregoing, recommend that an appropriation be made for the completion and erection, on board, of the machinery for these vessels as follows, viz:

For Puritan steam machinery .....	\$420,000
For Amphitrite steam machinery .....	230,000
For Terror steam machinery .....	230,000
For Monadnock steam machinery .....	286,000
	<hr/>
	1,166,000

## NEW ENGINES, ETC.

If the recommendations of the Bureau of Construction and Repair are carried out, to build "two armored ships of a displacement of 5,500 tons each, and of three unarmored gun-boats, having each a displacement of 700 tons," there should be appropriated for new engines, boilers, &c., for the same, the sum of \$1,900,000, estimated cost, more or less; and if it is decided to only appropriate a portion of this sum for the first year (as required by Bureau of Construction and Repair), then at least \$1,000,000 should be appropriated for expenditures on engines, boilers, &c., during said year.

## EXPERIMENTAL RESEARCHES.

The experimental board at the New York navy-yard, under the direction of Chief Engineer B. F. Isherwood, U. S. N., has been continued during the past year, and the reports made from time to time are evidence of the value and interest attending the labors of the engineer officers composing it.

## PERSONNEL OF THE ENGINEER CORPS.

The number of vacancies still existing in the grade of assistant engineer is quite large, being at this date no less than sixty-three, but the graduates from the Naval Academy will, in the near future, it is expected, be sufficient to bring the number up to the standard required by law.

In this connection it is proper to state that the reports from the ships where cadet-engineers are serving show them to be capable, intelligent, and zealous in a marked degree, and they are at this time performing fire-room and other duties in a highly satisfactory manner.

The duties assigned to cadet-engineers on board ship are precisely those which are necessary for them to perform in order to gain that practical knowledge of their profession so requisite for the finished engineer officer.

Machinists having been abolished by General Order No. 251, of June 30, 1880, it remains now but to supply their places with the rates of finisher, boiler-maker, and blacksmith, as provided for in the same order, when the necessity for our vessels going to navy-yards for slight repairs will cease to exist.

No casualties due to ignorance or carelessness have been reported from ships supplied with cadet-engineers for fire-room watches, and commissioned officers for engine-room watches; on the contrary, all reports of the condition of the machinery of our ships have been favorable in the highest degree.

The two cadet-engineers, Richard Gatewood and Francis T. Bowles, under instruction at the Royal Naval College at Greenwich, England, have borne out the exceptional ability displayed while at the Naval Academy, Annapolis, as will be seen by the following reports made by the president of the college to Lord Granville:

AMERICAN STUDENTS.—Mr. Gatewood has completed in a highly satisfactory manner his first year's course of study in naval architecture. At the examination last year he obtained the fourth place in order of merit in a class of twenty-two, and the following excellent marks:

Mathematics (pure).....	492 out of 1,200
Mathematics (applied).....	584 out of 1,200
Applied mechanics.....	1,008 out of 1,600

Heat, steam, and combustion .....	526 out of	800
Physics (lectures) .....	395 out of	500
Chemistry (lectures) .....	438 out of	500
Chemistry (practical) .....	228 out of	300
Descriptive geometry .....	158 out of	300
Steam, and the steam engine .....	290 out of	400
Practical ship-building .....	250 out of	600
Ship design and calculation .....	275 out of	500
Laying off .....	147 out of	400
Ship drawing .....	250 out of	250
	<hr/>	<hr/>
	5, 101	8, 550

**AMERICAN STUDENTS.**—Mr. Bowles, since he joined the college in October last, has worked with great diligence and perseverance at the several subjects included in the first year's course of naval architecture. The nature of these subjects and the proficiency he has attained in them are shown by the following synopsis of the results of his examination last June:

Mathematics (pure) .....	475 out of	1, 200
Mathematics (applied) .....	503 out of	1, 200
Applied mechanics .....	901 out of	1, 600
Heat, steam, and combustion .....	585 out of	800
Physics (lectures) .....	351 out of	500
Chemistry (lectures) .....	392 out of	500
Chemistry (practical) .....	300 out of	300
Descriptive geometry .....	134 out of	300
Steam and the steam engine .....	269 out of	400
Practical ship-building .....	193 out of	600
Ship design and calculation .....	158 out of	500
Laying off .....	105 out of	400
Ship drawing .....	250 out of	250
	<hr/>	<hr/>
	4, 616	8, 550

Their records thus far have been alike honorable to the young gentlemen, satisfactory to the department, and complimentary in the highest degree to the United States Naval Academy.

It will be observed by reference to the above reports that in this college the sciences of steam engineering and naval architecture are regarded as one, *i. e.*, the same course of studies are pursued in the two branches of engineering, as it should be, having reference to the design and construction of iron and steel ships.

#### APPRENTICE BOYS, ENGINEER DEPARTMENT.

From accounts received from the ships upon which apprentice boys, engineer department, are serving, it appears that the system gives satisfaction in nearly every case; and I am of the opinion that judicious legislation looking to a permanent organization of the system will speedily fill our fire-rooms with a class of Americans a credit to themselves and the Navy.

\* \* \* \* \*

I have the honor to submit herewith the annual estimates of this bureau for the fiscal year ending June 30, 1882.

Very respectfully,

W. H. SHOCK,  
*Chief of Bureau.*

Hon. R. W. THOMPSON,  
*Secretary of the Navy, Washington, D. C.*



# REPORT OF CHIEF OF THE BUREAU OF CONSTRUCTION AND REPAIR.

NAVY DEPARTMENT,  
BUREAU OF CONSTRUCTION AND REPAIR,  
October 29, 1880.

SIR: In conformity with your instructions of the 22d instant, I have the honor to submit herewith statements showing the work of the bureau for the past year, and estimates of expenditures for the year ending June 30, 1882.

1879.			
Feb. 14.	Amount appropriated for fiscal year 1879-'80.....	\$1,500,000 00	
	Expended:		
	From July 1, 1879, to July 1, 1880, for materials and stores at navy-yards, and labor and materials on foreign stations .....	\$262,926 00	
	From July 1, 1879, to July 1, 1880, for labor at navy-yards.....	1,137,164 00	
		<hr/>	1,400,090 00
	Balance on hand July 1, 1880 .....		99,910 00
			<hr/>
1879.			
March 3.	Amount appropriated to alter and repair the Antietam for marine barracks.....	7,525 00	
	Amount expended from July 1, 1879, to July 1, 1880 .....	7,517 33	
		<hr/>	
	Balance on hand July 1, 1880 .....		7 67
			<hr/>
1880.			
June 16.	Amount appropriated by deficiency act for purchase of ship-knees from T. C. Basshor & Co.....	22,692 00	
	Balance on hand July 1, 1880 .....	22,692 00	
1878.		For timber.	For sandries.
June 14.	Amount appropriated to meet a deficiency on account of fiscal year 1876-'77 .....	\$416,319 32	\$931,134 55
	Expended:		
	From June 15, 1878, to June 30, 1880.....	390,153 78	826,605 78
		<hr/>	<hr/>
	Balance on hand July 1, 1880.....	26,165 54	104,528 77

*Vessels on which work in repairing or completion was done during the fiscal year 1879-'80.*

Lancaster.	Powhatan.	Alliance.
Marion.	Shenandoah.	Dale.
Cohasset.	Burlington.	Franklin.
Hartford.	Essex.	Galena.
Leyden.	Juniata.	Adams.
Miantonomoh.	Saint Louis.	Alaska.
Nina.	Despatch.	Alert.
Richmond.	Montank.	Independence.
Swatara.	Nipsic.	Iroquois.
Vandalia.	Portsmouth.	Jamestown.
Alarm.	Saratoga.	Lackawanna.
Brooklyn.	Speedwell.	Monterey.
Constellation.	Tallapoosa.	Pensacola.
Constitution.	Yantic.	Tuscarora.
Minnesota.		

At the Kittery navy-yard we are mainly employed in rebuilding the Lancaster; the balance of the work consisting in repairing such vessels as may need repairs while cruising in that vicinity, chiefly those of the North Atlantic Station.

The Plymouth, Omaha, Congress, Kansas, Sabine, and Guard are here laid up in ordinary, and the Massachusetts is on the stocks.

Probably the only ships of this number worth repairing for sea service are the Plymouth and Omaha; the Guard might be fitted for a receiving or store ship; the others are useless for naval purposes.

At the Boston navy-yard we are repairing very thoroughly the Hartford, the wood material used being prepared chiefly by the Thilmany process, experience thus far having shown its excellence; and there is good reason to believe that much money will be saved by its general introduction in the repair and building of naval vessels.

There are here laid up the Niagara, Ohio, Iowa, and Ossipee, and there are on the stocks the Pennsylvania, Connecticut, and Oregon, none of which, with the exception, possibly, of the Ossipee, are worth finishing or repairing.

The Wabash is here used as a receiving-ship.

At the Brooklyn navy-yard we have the Brooklyn under repair. This ship, as well as the Lancaster and the Hartford, will be fitted with the approved ventilating apparatus, large air ports, and bilge keels, the success of the Richmond having demonstrated the value of these improvements.

The Vermont and Colorado are used as receiving-ships; the Susquehanna is in ordinary, not worth repairing; and the New York, Java, and Colossus are on the stocks; of these three ships, the New York alone is worth finishing.

At the League Island yard we have in hand the Juniata and Essex; the latter vessel is nearly ready for sea, but the former cannot be finished at this yard, as there are no means of docking her to make the required repairs below the water-line; it will be necessary, therefore, to tow her to New York to be docked, calked, and coppered.

The Antietam is used as a store-ship and marine barracks; and the Saint Louis as a receiving-ship. The vessels lying here in ordinary are the Miantonomoh, Jason, Dictator, and Supply. The Miantonomoh is ready for sea, with the exception of her turrets and pilot-house; these costly structures cannot be built without a special appropriation for the purpose, for which we are now waiting. The Jason is in good order; the Supply needs repairs; and the Dictator, when repaired and improved, will be one of our best fighting-ships.

At the Washington yard we have now under repair the Enterprise; and there are laid up in ordinary the Relief, Frolic, and Saugus. The first two can be used as temporary receiving-ships; the last is awaiting repairs. The monitor Passaic is here used as a receiving-ship.

The Yantic, having been thoroughly repaired and improved at this yard, has just been put in commission, and is expected to prove a most useful ship. She is the only vessel of her class which has been found worth repairs; and as vessels of this class have proved exceedingly useful, it is hoped that authority will be given to build several small vessels to take the place of those condemned.

At the Norfolk navy-yard the Canandaigua is about to be hauled up, resurveyed, and repaired, if found to be worth repairing. The work on this ship, if repaired, will necessarily be slow, as this yard is so well located on the coast that it is found the most convenient yard for docking and repairing vessels, particularly those of the North Atlantic Station; therefore, any large work in hand, such as rebuilding old ships, must necessarily be slow under the present appropriations.

The Franklin is here used as a receiving-ship, and the Savannah, Worcester, and Shawmut are in ordinary. None of the vessels in ordinary are worth repairing, and might with profit be sold.

At the Pensacola yard the want of proper facilities renders it impossible to do any other work than such only as may be required in keeping tugs, small boats, and other property of the bureau in good condition.

At the Mare Island yard we are repairing the Tuscarora, Iroquois, and Ranger; and there are in ordinary the Monongahela, Nyack, Comanche, Narragansett, Benicia, Saco, and Freda.

The Independence is here as a receiving-ship. The Mohican is in frame, well preserved, but will, nevertheless, deteriorate to some extent. This ship, as well as the New York, at the Brooklyn yard, and the monitor Dictator, at the League Island yard, it would be to the interest of the government to finish without delay. In order to do this work, and at the same time to repair and keep in good condition other vessels of the Navy, and also to replenish our stock of material, I have estimated for the next fiscal year for an appropriation of \$2,500,000, instead of the \$1,500,000 heretofore appropriated.

In China we have, during the past year, under the immediate supervision of Naval Constructor George W. Much, thoroughly repaired the Ashuelot, and she is now in good condition for many years' service. The Monocacy is now in hand, and will be repaired in the same manner, thus avoiding the great expense of steaming across the Pacific to the Mare Island navy-yard for repairs. The Palos, on this station, has also been improved and repaired.

The monitors now in private yards, viz, the Terror, at the yard of the Messrs. Cramp, in Philadelphia; the Puritan, at the yard of Mr. John Roach, at Chester; the Amphitrite, at the yard of Messrs. Harlan & Hollingsworth, at Wilmington; and the Monadnock, at the yard of Mr. Phineas Burgess, at Vallejo, Cal., are awaiting the appropriation necessary for their completion. As these vessels, with the Miantonomoh, will, when finished, be the most formidable we have, it is hoped that during the coming session of Congress appropriations will be made for their completion.

The vessels of all kinds belonging to the Navy are as follows:

In commission :	
Steamers.....	29
Sailing ships .....	4
Monitors .....	8
Torpedo-boats.....	2
	<hr/> 43
Inordinary:	
Steamers.....	18
Sailing vessels .....	8
Monitors .....	7
	<hr/> 33
Receiving-ships:	
Steamers.....	3
Sailing ships .....	3
Monitors .....	1
	<hr/> 7
Store-ships:	
Steamers.....	1
Sailing ships .....	3
	<hr/> 4
On the stocks:	
Steamers.....	5
Sailing ships .....	1
Monitors .....	4
Iron-clads.....	3
	<hr/> 13

## Repairing:

Steamers.....	9
At the Naval Academy:	
Sailing ships .....	3
Monitors .....	1
	<hr/> 4
Public Marine School:	
Sailing ship.....	1
Tugs of all kinds at yards and stations .....	25
	<hr/>
Total number of vessels.....	139

A brief inspection of the foregoing will show the necessity of an increase in the number of efficient vessels for the Navy. The finishing of the five monitors and two cruising ships, now commenced, and the improvement and repairs to the Dictator, are of the first importance. This addition to our small Navy would be of great advantage. We have now in the bureau a number of plans of iron unarmored cruisers and of iron armored rams, furnished by the naval constructors attached to the different navy-yards, under the order of the bureau of February 16, 1878. These plans can be made use of at any time the department may direct, but for the present I respectfully recommend the building of two armored ships of a displacement of 5,500 tons each, and of three unarmored gunboats, having each a displacement of 700 tons.

The estimated cost of these vessels under this bureau is \$2,900,000, but an appropriation of only \$1,500,000 will be required for the first year.

Should all the work herein recommended be done, the very considerable increase will be made to the effective force of the Navy of five double-turreted monitors, one monitor with a single turret, two unarmored and two armored cruisers, and three unarmored gunboats, making in all thirteen efficient fighting-vessels.

The appropriations asked for this bureau during the next session of Congress may be summed up as follows:

For preservation and repair of vessels, purchase of tools, materials, &c., finishing the New York and Mohican, and repairing the Dictator.....	\$2,500,000
For building three gunboats, and commencing work on two armored cruising ships.....	1,500,000
For finishing the monitors Terror, Puritan, Amphitrite, and Monadnock...	2,847,536
For building and fitting turrets and pilot-house for the Miantonomoh.....	275,000
	<hr/>
Total .....	7,122,836

Respectfully submitted.

J. W. EASBY,  
*Chief of Bureau.*

Hon. R. W. THOMPSON,  
*Secretary of the Navy.*

## MARINE CORPS.

- HEADQUARTERS MARINE CORPS,  
COMMANDANT'S OFFICE,  
Washington, D. C., October 23, 1880.

SIR: I have the honor to submit my annual report of the condition of the United States Marine Corps for the past year.

On the 30th September, 1880, there were 1,890 enlisted men in the United States Marine Corps, of whom 974 were on board ships in commission, and 916 at the several shore stations.

Much difficulty exists at the different naval stations in performing the duty required for lack of men.

It is deemed proper to first fill the guards of vessels in commission, and this leaves an inadequate number at the navy-yards. The men are, consequently, obliged to do "extra duty" in many cases; which, I fear, is a cause of desertion.

It is of the utmost importance to the interests of the whole service that Congress should appropriate for 2,000 privates, as is allowed by the act of July, 1861, and for this purpose, agreeably to your order, estimates have been submitted for that number.

It is also of great importance that more lieutenants be appointed; and it is hoped that the Department will urge this matter upon the attention of Congress.

I have recently inspected the posts at the different naval stations; I am happy to say that I found them in a very creditable condition, and the officers and men well instructed in their duties.

The testimony of the various commandants was that the duty was well performed, but that more men were needed.

The permanent barracks were found in a fair condition, requiring only the ordinary repairs to keep them in good order.

\* \* \* \* \*

Legislation, defining the manner of appointment in the Corps, and promotions and appointments in the staff, is much needed. A recent debate in the Senate over the appointment of an officer in the staff shows the necessity of it.

The Board ordered by the Department has prepared a system of regulations for the United States Marine Corps, which, it is hoped, may be favorably considered as being of great importance in defining its duties.

Every effort has been made on my part during the past year to improve the condition of the Corps by every means in my power. Frequent inspections are made by the Adjutant and Inspector of the different posts. All known defects are remedied as soon as possible. From July last, the men have been paid monthly, which has given much satisfaction.

It is my earnest wish to see the United States Marine Corps in the first rank of the military service as regards its military efficiency; and, to this end, the officers are urged to constant exertion in drilling and instructing those under their command.

Recruiting is carried on at the recruiting office in Philadelphia, Pa., and at the posts at New York, Boston, Mass., and Mare Island, Cal.; but, owing to the great prosperity now existing (work being plenty), there is some difficulty in enlisting men fast enough to keep pace with the discharges, &c. This, it is trusted, however, will not long prevent us from enlisting a proper number of men as the advantages of the service become better known.

On the 1st of July last, the manufacture of clothing for the enlisted men of the United States Marine Corps was commenced at the depot of the assistant quartermaster at Philadelphia. There is every reason to believe that, under the excellent system established by Capt. H. B. Lowry, Assistant Quartermaster, United States Marine Corps, this will prove very successful, and give us as good clothing as could be desired.

In conclusion, I beg to call the attention of the honorable Secretary of the Navy to the injustice done the United States Marine Corps in the fact that its commandant holds the rank of colonel, while the chief of every bureau in the Navy Department has the rank of commodore, and the head of every corps in the Army the rank of brigadier-general.



Within two years the Inspector-General of the Army and the Chief Signal Officer have received this grade by act of Congress, the United States Marine Corps alone, remaining with a colonel at its head, although consisting of 2,000 men.

Prior to the war the commandant held the rank of colonel to enable him to rank with the highest grade in the Navy, which was captain. Since then four higher grades have been created in the Navy. After the war the grade of brigadier-general was created and given to the commandant as a reward for the services of the Corps from its foundation. From motives of economy, Congress afterwards provided that this grade be again reduced to colonel, at which it now remains, two other officers in the Corps holding the same rank and receiving the same pay as the commandant.

It is respectfully urged that, upon a proper statement of this matter, Congress would remedy it at the coming session.

The annual estimates in duplicate, were forwarded to the Department on the 25th September last.

Very respectfully, your obedient servant,

C. G. McCawley.

*Colonel Commandant, U. S. M. C.*

Hon. R. W. Thompson.

*Secretary of the Navy, Washington, D. C.*

# REPORT

## OF THE

# SECRETARY OF THE INTERIOR.

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DEPARTMENT OF THE INTERIOR,  
*Washington, November 1, 1880.*

SIR: In submitting to you my last annual report on the operations of this department, with such suggestions as, in my judgment, it would be profitable to the public interest to adopt, I beg leave to pass in rapid review the policies followed in some of the most important branches of the public service under my supervision during the period of the present administration.

### INDIAN AFFAIRS.

When I took charge of this department the opinion seemed to be generally prevailing that it were best for the Indians to be gathered together upon a few large reservations where they could be kept out of contact with the white population, and where their peaceful and orderly conduct might be enforced by a few strong military posts. It was, perhaps, natural that, with limited knowledge of the character and needs of the Indians, and no experience in their management, I should at first accept that opinion, for the very reason that it was entertained by many who might have been regarded as competent authorities upon the subject. This view had already been acted upon to some extent before this administration came into office. It involved the removal of Indian tribes and bands from the lands they occupied, with their consent freely or reluctantly and doubtfully given, and in some cases the breaking up of beginnings of civilized occupations in their old homes. It was believed that this policy would be apt to keep the Indians out of hostile collision with their white neighbors, and in exclusive and congenial contact with their own kind, and thus prevent disturbances on the part of the Indians themselves and encroachments by the whites. Some measures of this nature had been carried out, and others were, indeed, not initiated, but executed during the early part of this administration. I refer especially to the removal to the Indian Territory of the Pawnees, of the Northern Cheyennes, and the Poncas, which I have found good reason very much to regret.

More extensive observation and study of the matter gradually convinced me that this was a mistaken policy; that it would be vastly better for the Indians and more in accordance with justice as well as wise expediency to respect their home attachments, to leave them upon the lands they occupied, provided such lands were capable of yielding them a sustenance by agriculture or pastoral pursuits, and to begin and follow up the practice of introducing among them the habits and occupations of civilized life on the ground they inhabited. It became also clear to me that the maintenance of the system of large reservations against the pressure of white immigration and settlement would in the course of time become impracticable. The policy of changing, shifting, and consolidating reservations for the purpose above stated was therefore abandoned, except in cases where the lands held by the Indians were not capable of useful development, and other lands better adapted to their advancement could be assigned to them.

The policy which, during the larger part of this administrative period, was pursued as a fixed line of conduct is the following: to respect such rights as the Indians have in the land they occupy; to make changes only where such lands were found to be unsuitable for agriculture and herding; to acquaint the Indians with the requirements of civilized life by education; to introduce among them various kinds of work, by practical impulse and instruction; gradually to inspire them with a sense of responsibility through the ownership of private property and a growing dependence for their support upon their own efforts; to afford to them all facilities of trade consistent with their safety, as to the disposition of the products of their labor and industry for their own advantage; to allot to them lands in severalty with individual ownership, and a fee-simple title inalienable for a certain period; then, with their consent and for their benefit, to dispose of such lands as they cannot cultivate and use themselves, to the white settlers; to dissolve, by gradual steps, their tribal cohesion, and merge them in the body politic as independent and self-relying men invested with all the rights which other inhabitants of the country possess.

Having thus fixed the ultimate end to be accomplished as well as indicated in general terms the means by which it is to be reached, in the shape of a clearly-defined policy, the department proceeded not only to continue the promotion of those civilizing influences which already had been set to work, but also to add others which so far had not been adopted.

#### AGRICULTURE AND HERDING.

In their agricultural pursuits the Indians have made commendable progress during the period of this administration. The uncivilized Indians have during the past year broken 27,105 acres of land; they have cultivated 168,340; they raised 408,812 bushels of wheat, 604,103 bushels of corn, 224,899 bushels of oats and barley, 375,843 bushels of vegetables; they cut 23,245 tons of hay; they owned 211,981 horses; they

had 78,939 head of cattle, 40,381 swine, and 864,216 sheep; they occupied 12,507 houses, they built during the year 1,639. The civilized tribes in the Indian Territory cultivated this year 314,398 acres; raised 336,424 bushels of wheat, 2,346,042 bushels of corn, 124,568 bushels of oats and barley, 595,000 bushels of vegetables, cut 124,000 tons of hay, and raised 16,800 bales of cotton. The uncivilized and the civilized Indians, therefore, together cultivated 482,738 acres; that is about one and three-quarters acres to each man, woman, and child, assuming the estimate that the whole Indian population is about 250,000 to be correct. They raised 745,236 bushels of wheat, 2,950,145 bushels of corn, 349,467 bushels of oats and barley, 970,843 bushels of vegetables, and 16,800 bales of cotton; they cut 201,245 tons of hay. I find in the statistics of 1876, the year before this administration came into power, that the quantity of wheat raised was 483,619 bushels, inclusive of 20,365 raised by the government employés at the agencies; 2,257,428 bushels of corn, inclusive of 27,968 bushels raised by the government employés; 155,112 bushels of oats and barley, inclusive of 20,332 raised by government employés; 313,254 bushels of vegetables, inclusive of 35,205 bushels by government employés; 116,097 tons of hay cut, inclusive of 92,882 by government employés. In addition to that there were 354 tons of melons raised, inclusive of 51 by government employés, and 924 tons of pumpkins, inclusive of 48 raised by government employés. It would appear from these statistics that the agricultural labor by the Indians since 1876 has been well nigh doubled in quantity and value. It may be remarked here that with every year these statistics are becoming more accurate and reliable; formerly they consisted in great part of mere rough estimates.

It is my firm belief that the agricultural industry of the Indians would be greatly stimulated and its product very much increased if assurance were given to them that they will be secure in the possession of their lands. I find that in a considerable number of cases Indians are not as willing as they should be to make permanent improvements for the avowed reason that they entertain doubts as to whether those improvements will redound to their own benefit. From all sides requests made by Indians are brought to the knowledge of the department that the government should give them such a title to their lands as is held by white men. I consider it therefore of the highest importance that the measure I urgently recommended allotting agricultural lands among the Indians in severalty, and giving them individual title inalienable for a certain period, be enacted without delay. The number of those who still desire to adhere to their old habits of life, seeking their sustenance by the chase or depending entirely upon supplies furnished by the government is rapidly decreasing. Care has been taken to convince them that the disappearance of game and the constantly progressing settlement of the country by whites are rendering a change in their occupations absolutely inevitable; and that conviction is taking possession of their minds to a greater extent than ever before.

It may be said that exceptions to this rule are becoming rare, and that if now proper measures are taken to secure them in the individual ownership of land, and to aid them liberally in their agricultural pursuits by furnishing them implements and cattle, they will in a comparatively short space of time result in the permanent settlement of most of those tribes and bands which but a few years ago were roaming through the country as savages.

#### OTHER THAN AGRICULTURAL PURSUITS.

One of the most fruitful measures of the present administration has been the introduction of freighting and mechanical pursuits among the Indians. In last year's report I had the pleasure to state that the experiment of employing Indians as freighters with their own ponies had been completely successful. This year's experience has been such as to confirm my conviction that this measure has in its effects been one of the most beneficent innovations ever made in Indian management. The Indians so employed have not only continued to prove themselves the most faithful, efficient, trustworthy, and economical freighters the government ever had, but they have become fond of this occupation, and gradually more skilled in carrying it on. The Commissioner of Indian Affairs reports that the Kiowas and Comanches in the Indian Territory, and the Sioux at the Pine Ridge and Rosebud Agencies, have transported during the past year not less than eight million pounds of supplies and annuity goods, over distances of 165, 160, 200, and 92 miles, respectively; and in compensation therefor, they have received the sum of \$115,900, which, although appearing large, has been a considerable saving compared with the amounts formerly paid to white transportation contractors. "So popular has this branch of industry become, that the demands of the Indians for freighting are largely in excess of the quantity of government freight to be transported; and the letting of a transportation contract for Indian goods to a white man would be deemed an infringement on their rights and privileges." \* \* \* "Skill and care in the management of their teams, despatch in the handling and forwarding of the freight, and absolute honesty and trustworthiness in the care of the goods *in transitu*, have characterized the Indian transportation service; not a package has been lost, not a case or bale broken open or tampered with. The success of the enterprise has made it a permanent feature in the policy of Indian civilization."

At the beginning of this administration no freighting was done by Indians. Last year the number of Indian freight wagons running was stated at 1,356. This year it has been nearly 2,000. Indian freighting has been gradually introduced at the Cheyenne and Arapaho, Kiowa and Comanche, Devil's Lake, Sisseton, Fort Hall, Osage, Kaw, Pawnee, Ponca, Oakland, Sac and Fox, Pottawatomie, White Earth, Great Nemaha, Western Shoshone, Grand Ronde, Siletz, Warm Spring, Green Bay, Yakama, Shoshone, Rosebud, and Pine Ridge Agencies, and in



addition to this the Uintah Utes have this fall undertaken to transport the goods and supplies purchased for them.

In several instances I have seen Indian freighters employed by white people living near the Indian camps, and I have no doubt that this industry can be greatly extended aside from the transportation of government goods. It has introduced thousands of Indians formerly idle and shiftless to habits of industry, inspired them with a desire to earn money and accustomed them to its prudent use.

In my report of last year I stated the number of Indian youth learning trades in various work-shops at the agencies and elsewhere as 185. This number has since been increased to 358. The policy of employing Indians as workmen and even as foremen and machinists at the agencies has been continued and extended with great success. Brick-making has been begun. Houses for the Indians are now almost exclusively built by the Indians themselves. The aptitude shown by the Indians for mechanical work has in many cases been surprising and deserves every possible encouragement.

#### EDUCATION.

Expressions of an anxious desire on the part of the Indians belonging to the so-called wild tribes to have their children instructed in the ways of civilized life have grown so numerous and urgent, that the inadequacy of the means placed at the disposal of the department for this purpose has become particularly painful. I stated in my last report that mere day schools upon the Indian reservations have, in many respects, proved an insufficient agency for the education of Indian youth. The simple reason is that they do not withdraw the pupils from the influences of their home surroundings in such a manner as to facilitate a change in their habits of daily life. To this end boarding-schools are required, where pupils can be instructed, not only in the elementary branches of knowledge, but also in house-work, mechanical pursuits, and other civilized occupations. In fact it is just as necessary to teach Indian children how to live as how to read and write. The appropriations made by Congress permitted the opening of only three additional boarding-schools during the past year; but arrangements were made for erecting eleven school buildings the coming season, and for the establishment of thirteen new schools of that kind, which, however, will satisfy the demands of only a limited number of Indians who have so far been without such facilities. In order to put these schools in full operation, further appropriations by Congress at the next session will be required. I desire to call special attention to the report of the Commissioner of Indian Affairs upon this subject. He sets forth plainly how utterly insufficient the means at the disposal of the department have been so far to afford to even one-half of the Indian children on the different reservations the most necessary educational facilities; and I deem it my duty to repeat that false economy in this respect at

the present moment, when the desire for the education of their children is so general and so urgent among the Indians, would be particularly unwise.

In my report of last year I spoke of the promising results of Indian education at the normal school at Hampton, Va., under the direction of General Armstrong. The number of Indian children at that establishment is being considerably increased. The institution has been visited by many persons interested in that important work, and the gratifying results gained have been evident to all.

Last year I spoke also of the Indian school at Carlisle, then just established by this department, under the superintendency of Captain Pratt, as an experiment. It may now be said that it is a mere experiment no longer. The progress made by the Indian pupils there as well as at Hampton in the acquisition of elementary knowledge as well as in agricultural and mechanical work has been sufficient to demonstrate the capacity of the Indian for civilized pursuits. The pupils are instructed not only in the English language, in reading, writing, lower mathematics, geography, &c., but the girls are educated in household work, and a considerable number of the boys are employed as apprentices in blacksmithing, carpentering, shoemaking, harness making, wagon building, tin smithing, tailoring, in a printing office, and in farm work. The progress made by some of them has been remarkably rapid, and in almost all cases satisfactory. The number of pupils at Carlisle has been increased to 196. Some of the products of their labor were exhibited at the county fair, and attracted general and favorable attention. The school is now able to produce some articles to be used at the different Indian agencies, such as shoes, tin ware, harness, and wagons, and when the pupils return to their tribes they can be profitably employed, not only as practical mechanics but also as instructors of their people.

A similar school has been established at Forest Grove in Oregon, under the superintendency of Lieutenant Wilkinson, for the education of Indian boys and girls on the Pacific Coast. It has been in operation since February last, and is conducted upon the same principles and with equal success as the schools at Hampton and Carlisle. It has now 40 pupils, representing six different tribes, but the buildings erected are large enough to accommodate 150. There are many applications for admission which will be gratified as funds can be made available for that purpose. Instructions have been given to increase the number of pupils to one hundred. In addition to this, during last year 36 children have been selected from the tribe of Eastern Cherokees and placed in boarding schools in North Carolina, 12 girls at Asheville and 12 boys each at Weaverville and Trinity College, where, aside from elementary instruction, they are to receive training in industrial pursuits. The Indian pupils at Hampton represent thirteen different agencies. At Carlisle there are boys and girls

belonging to various bands of the Sioux, Cheyennes, Arapahoes, Kiowas, Comanches, Pawnees, Menomonees, Iowas, Sac and Fox, Lipans, Poncas, Nez Percés, Wichitas, Apaches, and Pueblos. About two-thirds of them are children of chiefs and prominent men. A school committee of chiefs and headmen from nine Sioux Agencies on the Missouri River visited Carlisle and Hampton last summer. Likewise delegations from the Lake Superior Chippewas, the Crows, the Shoshones and Bannacks of Idaho, and the Cheyennes and Arapahoes of the Indian Territory. They were all highly delighted with the care taken of the children and the progress they had made in the arts of the white man, and promised their active support and co-operation.

The favor which these schools find with the influential men of the different Indian tribes is of great importance as to the effect to be produced upon the advancement of the Indians generally. Formerly it was thought that Indian children so educated would speedily relapse into the savage habits of their people as soon as they returned to them. This was true as long as all the home influences to be found among the Indian tribes were hostile to the education of any of their members, and those who had received such an education found themselves therefore isolated and despised. This obstructive spirit has now been superseded by a very general and anxious desire of Indian chiefs and influential men to see their children raised in the scale of civilization, and the same influences which formerly were so effective in driving educated Indians back into the savage habits of the multitude surrounding them are now employed in turning the education received by a comparatively few to the advantage of the many. The circumstances surrounding the educated Indian when now returning to his tribe are therefore radically changed. In the old time the educated Indian would have found his people thinking of nothing but their savage pursuits and pleasures, incapable of appreciating his superior knowledge and accomplishments, rather inclined to deride them as useless. Now he will find multitudes of parents anxious to have their children educated like him, and, if possible, to employ him for that purpose. An Indian wagon or harness maker returning to a wild Indian tribe years ago would have found no wagons or harness upon which to practice his skill; but sent back there now, when wagons and harness are in general and profitable use, that skill will be in active and general requisition. And so it is in many other things. I therefore feel warranted in saying that the results gained by this system of education will no longer be apt to pass away as before, but, if properly pursued, will be lasting and generally beneficial. It is, under such circumstances, scarcely necessary to characterize the charge recently made, that Indian children were taken to Hampton and Carlisle by force, against the will of their parents, as utterly groundless. On the contrary, the number of applications on the part of Indian parents to have their children admitted to these schools has been far in excess of our means to accommodate them.

A considerable number of the Indian boys and girls at Hampton and Carlisle have, during the summer vacation, been intrusted to the care of private families in Pennsylvania and Massachusetts, where they have received very valuable lessons in household economy and farming, and where they were under the elevating influence of cultivated homes. Their conduct has been generally commended. The number of Indian children educated in these schools is at present necessarily small in proportion to the whole number of children of school age; but the system is capable of great extension, if only the necessary means are provided. It is a mere question of money and of wise and active supervision. In no direction could money be more usefully employed. The success of the schools at Hampton and Carlisle has attracted the sympathy of many benevolent men and women throughout the country, and I have to express my thanks to them for valuable donations with which the schools have been aided. But the continuance and development of these government institutions cannot and ought not to depend upon private munificence. So far the expenses have been defrayed from the civilization fund at the disposal of this Department; but that fund has already been largely drawn upon in establishing and sustaining Indian education at these institutions, and cannot be depended upon to last much longer, especially if the system is extended as it should be. The continuance of this work will then depend upon specific appropriations by Congress, and I cannot too warmly recommend this subject to the favorable consideration of our legislators. As each school is capable of taking care of only a limited number of pupils, the number of such institutions should be increased. There are government buildings no longer used which might be profitably employed for that purpose, and they certainly can be used for no worthier object. It is in contemplation to establish another Indian school of this kind in some unoccupied public buildings in the neighborhood of Washington, where it would be easily accessible for the inspection of members of Congress, and I hope this plan may soon be carried out.

#### INDIAN POLICE.

Another civilizing agency largely introduced under the present administration was the organization of a police force consisting of Indians. It has been put in operation at forty agencies and the force consists now of 162 officers and 653 privates. The duties of the policemen, performed under the direction of the agent, consist in acting as guards at annuity payments and rendering assistance and preserving order during ration issues and protecting agency buildings and property; in returning truant pupils to school; in searching for and returning lost or stolen property, whether belonging to Indians or white men; in preventing depredations on timber and the introduction of whisky on the reservation; in arresting or driving off whisky-sellers, horse and cattle thieves; in making arrests for disorderly conduct, drunkenness, wife-beating, theft,

and other offenses; in turning over offenders to the civil authorities; in serving as couriers and messengers; in keeping the agents informed as to births and deaths in the tribe; in notifying him of the arrival on the reservation of strangers—whites or Indians; in accompanying and protecting surveying parties, and, in general, such other duties as in civilized communities are intrusted to an organized police force.

The Commissioner of Indian Affairs states that "special reports as to the character and efficiency of the services rendered by the police have recently been called for from its agents by this bureau, and those reports bear uniform testimony to the value and reliability of the police service, and to the fact that its maintenance, which was at first undertaken as an experiment, is now looked upon as a necessity."

But no less important than the police services rendered is the moral influence which this institution is apt to exercise upon the tribes among which it is active. It impresses the minds of the Indians with the authority of law; it discountenances and discourages their traditional practice of taking personal revenge for injuries received; it imbues them with a sense of duty and individual responsibility; it accustoms a considerable number of young men among them to a moral discipline formerly unknown to them; it inspires them with the pride of good conduct, as only men of exemplary habits are kept in the police force, it being the rule that every one of them who renders himself guilty of any transgression affecting his character is immediately discharged; it strengthens the authority of the government as against that of the chiefs by the active support of the Indians themselves, and thus prepares them for the dissolution of their tribal relations and their incorporation in the great body of the American people. In all these respects the effect of the police service upon the tribes has been very marked. I have repeatedly recommended that the pay of Indian policemen, now fixed at \$5 per month for privates and \$8 for officers, be increased. It is essential that the best young men of each tribe be obtainable for the police force, but the rate of pay is so low that young Indians can easily earn much higher wages as freighters and laborers, and it is a subject of great dissatisfaction among them that a policeman, who considers himself the soldier of the government, should receive only one third of what an Indian scout in the military service receives for the discharge of duties no more important. The consequence is, that as the different tribes progress in civilization it becomes more difficult to obtain good young men for the police force. At two agencies the force had to be disbanded for this reason. I therefore repeat once more my urgent recommendation that the pay of policemen and their officers be remitted to the discretion of the Indian Office with a maximum to be fixed by law, and as that maximum I would suggest the pay of Indian scouts employed by the Army.

#### LAND TITLES IN SEVERALTY.

I mentioned before that the feeling of uncertainty which prevails among the Indians as to the permanency of their possession of the lands



they occupy has proved in many cases a serious impediment to their improvement and progress. From all quarters we receive expressions of a desire on the part of the Indians to have the land they occupy and cultivate secured to them by the "white man's paper," that is, a patent equal in legal force to that by which white men hold title to their land. Bills have been submitted to Congress for two sessions providing for the division of farm tracts among the Indians in severalty on their respective reservations; the issuance of patents to them individually and their investment with a fee-simple title to their farms inalienable for a certain number of years until they may be presumed to have overcome the improvident habits in which a large part of the present generation have grown up; and, this being accomplished, for the disposition of the residue of the reservations not occupied and used by the Indians, with their consent and for their benefit, to white settlers. It was hoped that this measure would pass before the adjournment of the last session. Had it become a law a very large number of Indians would have been so settled by this time. In this expectation the issuance of patents not containing the important clause of temporary inalienability, which is authorized by a few Indian treaties, has been withheld until a general law should insure to all titles of greater security. It is to be hoped that this important measure will now receive the earliest possible consideration and action by Congress. I look upon it as the most essential step in the solution of the Indian problem. It will inspire the Indians with a feeling of assurance as to the permanency of their ownership of the lands they occupy and cultivate; it will give them a clear and legal standing as landed proprietors in the courts of law; it will secure to them for the first time fixed homes under the protection of the same law under which white men own theirs; it will eventually open to settlement by white men the large tracts of land now belonging to the reservations, but not used by the Indians. It will thus put the relations between the Indians and their white neighbors in the Western country upon a new basis, by gradually doing away with the system of large reservations, which has so frequently provoked those encroachments which in the past have led to so much cruel injustice and so many disastrous collisions. It will also by the sale, with their consent, of reservation lands not used by the Indians, create for the benefit of the Indians a fund, which will gradually relieve the government of those expenditures which have now to be provided for by appropriations. It will be the most effective measure to place Indians and white men upon an equal footing as to the protection and restraints of laws common to both. I desire also to call attention once more to the bill repeatedly introduced in Congress, extending over Indian reservations the government of the laws of the States or Territories in which such reservations are located, giving the Indians standing in the courts and securing to them the full benefit of the laws. I venture to express the hope that Congress may not adjourn again without having taken action upon

these important measures, so essential to the progress and security of our Indian wards.

#### RAILROADS THROUGH INDIAN RESERVATIONS.

It has been the policy of this department to facilitate the building of railroads through Indian reservations as much as laws and treaties permitted, at the same time in every instance protecting the interests and rights of the Indians. In a few cases a certain prejudice prevailing among the Indians against the establishment of thoroughfares of trade through their reservations had to be overcome. But it was made clear to them that it is important for their security and well-being not to provoke hostile feelings on the part of the white people by needlessly offering obstacles to the progress of civilization and to the execution of enterprises generally useful. Neither can it be doubted that it will ultimately be best for the Indians to come into contact with truly civilizing agencies. In the same measure as the Indians become producers, agriculturists, and herders, the proximity of railroads will become important to facilitate the transportation, and thereby enhance the value, of their products. When application is made by railroad companies for permission to pass through an Indian reservation, the Indians are assembled in council and consulted as to their views and wishes, and as to the measure of compensation to be paid by the railroad company seeking the privilege. In this way the assent of the Indians has, so far, in every case been readily obtained, and the required compensation paid by the respective companies. Rights of way have thus been granted through the Sisseton Reserve, in Dakota, to the Chicago, Milwaukee and Saint Paul Railway Company; through the Otoe and Missouri Reserve, in Nebraska, to the Republican Valley Railroad Company; through the Winnebago and Omaha Reserve, in Nebraska, to the Saint Paul and Sioux City Railroad Company; and through the Walker River Reservation, in Nevada, to the Carson and Colorado Railroad Company.

The Dakota Central and the Chicago, Milwaukee and Saint Paul Railroads are now making preliminary surveys, with the consent of the Indians and under an escort of Indian police, through the great Sioux Reservation, in Dakota, to connect the mining districts of the Black Hills with the Missouri River and Eastern railroad systems. Negotiations with the Indians for the right of way are now pending, and a satisfactory adjustment of the question of compensation is expected in the near future.

#### GENERAL REMARKS.

From its very beginning the Indian service may be said to have been the "best abused" branch of the government. While the Indian question is discussed by conscientious and well-informed persons with good judgment and a fair appreciation of circumstances, and their praise and censure are alike valuable, the number of American citizens "who know

all about Indian matters" without ever having given a moment's study to that large and complicated subject, has been incredibly great, and the readiness and volubility of their criticism, mostly condemnatory of everything that is done, seems inspired by an inexhaustible fertility of imagination as to facts. No story, ever so extravagant and absurd, can be told about Indian management without finding ready belief. But recently I saw a statement, seriously put forth in respectable newspapers, that the guns and ammunition with which the Indians fight our soldiers are to this day regularly furnished to the savages by the Indian Bureau, or are permitted to be sold to them by licensed traders on the Indian reservations. Whenever an Indian misconducts himself, or the greed or recklessness of white men provoke an Indian trouble, an outcry follows about the disgraceful remissness of the government, and it is at once proclaimed that we are as far as ever from the solution of the Indian problem.

No doubt the history of Indian management, under military as well as civil control, shows many instances of mistake, failure, and wrongdoing; but no fair-minded man can examine that history or the present state of things without admitting that the government has had to contend against enormous difficulties, and that the greatest of these and the most prolific of trouble was the pushing of settlements into the country inhabited by the Indians and the crowding out of the latter, regardless of their rights of occupancy, in many cases guaranteed by treaties. This difficulty could in many instances not be controlled by the Indian Department, which was held responsible for many complications and evils not in its power to avert. It must also be acknowledged that while every disturbance was generally and loudly noticed and commented upon, the good things done escaped in many, if not most cases, public observation and recognition.

It cannot be my purpose, however, here to go into a minute review of the past. Looking at the present condition of things it may be said, without exaggeration, that on the whole the Indian situation is now more hopeful than ever before. The desire of the Indians to maintain friendly relations with their white neighbors, to go to work for their own support, to cultivate the soil, to acquire permanent homes, to have their children educated, and to assimilate themselves to the civilization of the country, is growing stronger and more general every day. The measures prosecuted and in part originated under this administration, which have been mentioned before: the enlargement of the agricultural activity of the Indians; the distribution of cattle among them to promote the industry of herding; the extensive introduction of the freighting business; the encouragement of mechanical industry; the institution of the Indian police, stimulating their respect for law and authority; the increase of their educational facilities, notably among them the education of Indians at Hampton and in North Carolina, and the establishment, by the government, of the Indian

schools at Carlisle and Forest Grove, may be said to have been very effective in this direction. When, in addition to all this, the bill advocated by this department to allot lands among the Indians in severalty, and to confer upon them individual title in fee simple, inalienable for a certain period, shall have been made a law, and that law shall have been applied among all the Indian tribes, which, in my opinion, it can be in a few years, and the rights of the Indians are accorded equal protection in the courts of the country with those of white men, then it may be said that all essential measures will have been taken to solve the Indian problem, and the time may be confidently looked for when the Indian population may be merged in the great body of American citizenship. We are on the straight road to that solution and nearer to its accomplishment than is generally supposed. It is essential, however, that the policy here set forth should be carefully protected against hostile interferences and guarded against ill-advised precipitancy.

The management of Indian affairs has to deal with two distinct currents of sentiment in this country. The one is that Indians will not work; that to recognize any rights of the Indians is a wrong to the white people; that to secure them in the possession of lands, whatever title they may have to them, is an obstruction to the progress of the country, by depriving whites of the lands they ought to have for their use; and that the only proper thing to do is to get the Indians out of the way altogether. This theory, I regret to say, is most strongly upheld in that part of the country which is inhabited by most of the Indians themselves. The pressure of the white population upon Indian reservations, animated with this spirit, has, in fact, been the principal source of our Indian troubles. It is scarcely necessary to point out to fair-minded men the injustice and inhumanity of such principles, or to show to those who have the experience of the past before their eyes that to act upon those principles would not only be a great wrong to the race which was the original occupant of this continent, but must also lead to most costly and disastrous conflicts with them. The other current of opinion is that the Indians, even as they now are, must at once be relieved of all restraints to which white people are not subjected, and must, without further preparation, be accorded the enjoyment and exercise of all the rights which the civilized citizens of this country enjoy and exercise. This view is entertained and advocated most warmly in that part of the country which is farthest removed from the ground upon which the Indian problem has to be solved. While this will certainly be the ultimate end of a wise policy, and should be applied to all who are capable of intelligently exercising and enjoying such rights, it must be admitted that the number of Indians fitted for their intelligent enjoyment and exercise, and, in fact, even for an intelligent understanding and appreciation of them, is still comparatively small, and that to throw the uncivilized red man, such as he now is, into the struggles and competitions of life with his white neighbor, without sufficient preparation and active

care and guidance on the part of the government during the intermediate period, would be the greatest cruelty to him. The adoption of the principles first mentioned would keep the Indians in barbarism for the purpose of accelerating their extinction; but general and premature action upon the second would precipitate upon them a conflict with overwhelming superior forces, unprotected and unguided by the hand of a friendly power, and thus accelerate their destruction likewise.

While the government, therefore, must recognize its duty to protect the rights of the Indian, it should at the same time not forget that, during the period of transition from savage life to civilization, he stands very much in need of its care and guidance. That period is one of hope, but at the same time one of great danger. Then the picturesque, warlike, self-relying Indian of the wilderness gradually disappears. He enters into conditions and relations of life entirely new to him; his self-reliance gives way; he does not know whether that which he learns is good or evil; he is liable to acquire with the virtues of civilization its vices, and the latter more easily than the former; he is a mere child, alike accessible to evil and to good influences; if prematurely relieved of all restraints of intercourse, he is apt in the sparsely-settled countries of the far West to fall first into the hands of elements of population whose influence upon him will not be elevating; he is in danger of becoming a drunkard before he is able to measure the evils of drunkenness; he is liable to be tricked out of his property before he has a full estimate of its value; he has to overcome his life-long habit of careless improvidence as to the coming day; his first introduction into the contests of civilized life will be likely to overwhelm him with a feeling of helplessness, and he naturally looks up to the "Great Father" for a protecting and guiding hand. That hand must not be prematurely withdrawn on the theory that the mere recognition of the Indian's rights will be sufficient to enable him intelligently to exercise and to maintain them.

We must not expect too much of his first efforts. If the results of those efforts do not speedily rise to the white man's standard, patient help must be given to raise them to the level which they can attain. Neither must we indulge in the hope that the Indian, however hopeful his progress at the beginning, will very soon become as useful a citizen as the average of his neighbors; but we may certainly hope to see a large number of them gradually raise themselves to that position in a working and productive community which many Indians in the Indian Territory, in Indiana, Michigan, and other States have already reached. There are many among them who are now intelligent and useful citizens, many others rapidly qualifying themselves for citizenship, and there is no reason to doubt that this class may in the course of time be largely increased.

Experience has strengthened my conviction, which, this being my last report, I now feel at greater liberty to express, that while the guiding care of the government is necessary, that task should be intrusted to the



civil and not to the military branch of the public service. The history of Indian management shows many failures and miscarriages, which patriotic citizens look back upon with keen regret; but it is a mistaken opinion that these failures and miscarriages would have been avoided had the control of Indian affairs been intrusted to another branch of the public service than that which now conducts it. The period during which the management of Indian affairs was in military hands need only be carefully studied to cure any fair-minded man of such a delusion.

Last year I set forth the fact that the normal condition of the Indians is not, as is believed by many, turbulence and hostility to the whites; that it must not be the only nor the principal object of an Indian policy merely to keep the Indians quiet, and that to keep them quiet the constant presence and pressure of force is not required; that of the 71 Indian agencies then existing, now reduced to 67, there are only 11 which have military posts in their immediate vicinity, and only 14 with a military force within one to three days' march; that those in a state of hostility usually form but a very small percentage of the whole Indian population; that of the 250,000 Indians in the United States there have been since the pacification of the Sioux at no time more than a few hundred in hostile conflict with the whites; that such partial disturbances have not been provoked by the absence nor prevented by the presence of a military force; that of the four disturbances which occurred within the last three years three broke out in the immediate presence of such a military force, and only one without it; that a very large majority of Indian reservations are in a condition of uninterrupted quiet without the presence of a soldier; that the more civilized an Indian tribe becomes, the more certainly can its peaceable and orderly conduct be depended upon, and that the progress of civilization and the maintenance of peace among the Indians have always gone hand in hand. I am by no means unmindful of the difficulties connected with the management of the Indians by civil officers, which difficulties consist partly in finding men peculiarly qualified for so delicate a task, and in maintaining the integrity and working efficiency of the service. These difficulties, formidable as they may appear, can be and have been in a great measure overcome by constant watchfulness and careful direction. Complaints that the Indians do not obtain the goods appropriated for by Congress, or obtain them only in inferior quality, are disappearing. Cases of speculation and gross misconduct on the part of Indian agents have become exceedingly rare, so much so that even the reports of military officers who had been the most watchful, ever ready and willing critics of the Indian service while in the hands of civilians, have become almost entirely silent upon this subject as to the present management. I do not see any reason why this condition of things cannot be maintained in the future by the application of the same means, and why the same pride of calling which inspires other branches of the service should not be kept alive among the officials of the Indian Department. That the service is not perfect, as, perhaps

service is, I willingly concede; but I am also convinced that the substitution of military management would not in itself obviate existing difficulties, but would add others in effect likely to prove still more serious.

A careful investigation of the subject will convince any fair-minded inquirer that military management will not be more economical in the point of pecuniary outlays than the civil management is now. Of greater importance is the ascertained fact that the Indians have generally a strong dislike for military control—not for the mere reason that the presence of an armed force is distasteful to them, for the success of our Indian police system shows that they submit to the restraints imposed upon them by such a force with great willingness, and exercise the police regulations under the direction of prudent agents with great alacrity; but there is a variety of other reasons for their repugnance which it would lead me too far to mention. It is easy to understand that if the management of Indian affairs were turned over to the military service the interests of the Indians and the interests and convenience of the Army might not always agree; and it is from no disrespect to the Army when I express the opinion that under such circumstances it might sometimes be questionable which interests would have the preference. It is certainly true, and within my own knowledge, that some military officers have shown great aptitude for the management of Indians in their peaceful pursuits and relations; but it is also true that the very spirit of the calling of military men is apt to suggest the application of force as one of the first resorts, even in the cases where peaceful teaching and patient guiding are most required. There have been many instances of this kind. Without going into a full statement of all the reasons upon which my conviction in this respect is based, I will simply quote, with the strongest possible approval, the recommendation of the Peace Commission of 1868, couched in the following language: “This brings us to consider the much mooted question whether the bureau should belong to the civil or military department of the government. To determine this properly we must first know what is to be the future treatment of the Indians. If we intend to have war with them, the bureau should go to the Secretary of War; if we intend to have peace, it should be in the civil department. Under the plan which we have suggested, the chief duties of the bureau will be to educate and instruct in the peaceful arts; in other words, to civilize the Indians. The military arm of the government is not the most admirably adapted to discharge duties of this character. We have the highest possible appreciation of the officers of the Army, and fully recognize their proverbial integrity and honor; but we are satisfied that not one in a thousand would like to teach Indian children to read and write, or Indian men to sow and reap. These are emphatically civil, and not military, occupations.” This report was signed by William T. Sherman, then Lieutenant-General of the Army, Brig. Gen. William S. Harney, Bvt. Maj. Gen. Alfred H. Terry, and Bvt. Maj. Gen. C. C. Augur.

Under the circumstances described in this report, it must be evident that the mission of Indian management will henceforth be, more than ever, a mission of peace and not a mission of war. The principal agencies which must be depended upon for the solution of the Indian problem are work, education, the permanent settlement upon agricultural and pasture lands, security of title, and equal protection of the law. All these are civil agencies, and the more the land interests of the Indians press into the foreground, the more necessary will it be that Indian management be connected with that branch of the service which has the administration of public lands under its special control.

It has also been suggested that the Indian service, owing to its importance, should cease to be a mere bureau in the Interior and be intrusted to an independent department. I should consider this advisable only if the head of that department could at the same time hold a place in the Cabinet, enabling him to make his views heard in its deliberations and to communicate on equal terms with the heads of the other departments of the executive branch of the government. But this would involve the larger question whether it would be wise to increase the number of Cabinet officers, and until this question is decided in the affirmative it would in my opinion be most advantageous to the public interest to permit the Indian service to remain under the direction of the Secretary of the Interior, to be thus represented in the executive council.

Finally, I desire to say that it has not been the policy of this department under my administration, while avoiding all unnecessary outlays of money, to cut down expenses merely for the purpose of making a striking exhibition of economy. The history of Indian affairs shows that ill-judged parsimony has not unfrequently led to serious trouble and very costly complications. I am now convinced that generous appropriations for agricultural implements, for stock cattle to be distributed among Indians, and for educational facilities, made at this time, when the temper of our whole Indian population is such as to receive such aid in the right spirit, and to use the advantages conferred for general and rapid advancement, will produce results certain to accelerate the solution of the greatest difficulties we have so far been contending with, and, consequently, to bring about a great saving of money in the future. When an Indian lives in a house which he considers his own and that of his family, as now thousands of families are living and many more thousands desire to live; when he cultivates his acres, has them fenced by his own labor, and enjoys the product of his agricultural work, either by his own consumption or the sale of a surplus; when he owns his plow and his wagon, and uses the latter, with his ponies, in freighting, by which he earns liberal wages; when he has his cows, and swine, and poultry on his land, the care of which he finds useful and profitable; when he can send his children to school, and begins to hope that they may become as civilized and prosperous as white people, he will soon cease to think of leading the life of a nomad, and the thought of war

will no longer have any charm for him. He will gradually become ashamed of being a beggar, as many of them have expressed themselves already, and feel a pride formerly little known to him, to depend for his own sustenance and that of his family upon his own efforts. This is not a mere fancy picture, for I have myself observed a multitude of examples of this kind, and manifestations of urgent desire in this direction on the part of Indians are coming to this department in constantly increasing numbers. It appears, therefore, of the highest importance that the government should promptly take advantage of this disposition and stimulate it with generous aid until the final solution of the problem is reached.

#### THE UTES.

At the time I rendered my last report, the settlement of the difficulties which had occurred on the Ute Reservation in September, 1879, was still the subject of negotiations between the Ute tribe and the commission appointed for that purpose, consisting of General Hatch, Mr. Adams, and Chief Ouray. Those negotiations resulted in the surrender of Chief Douglass, of the White River Utes, to the authorities of the United States. The commission recommended that a delegation, representing the various bands of the Ute tribe, be permitted to visit Washington for the purpose of effecting such a settlement as would prevent further troubles. Several headmen of the Southern Utes, under the leadership of their chief, Ignacio, and of the Uncompahgre Utes, headed by Ouray, as well as of the White River Utes, were received here, and after prolonged negotiations these representatives of the Ute tribe consented to the surrender of the whole Ute Reservation in Colorado, on condition that the Ute Indians be settled in severalty, with an individual title in fee simple to their farms on certain small tracts of land in that reservation and immediately adjoining it, the White River Utes to go to the Uintah Reservation, and that the annuities due be paid to them, and further annuities be provided for; the Utes thenceforth to be as individuals occupying their farm tracts respectively under the jurisdiction of local laws and courts. This arrangement was considered a measure of great importance, not only for the reason that it would be apt to prevent a costly and destructive Indian war, but also that for the first time in the history of Indian management it provided for the formal discontinuance of the tribal existence of an Indian nation and for their individual settlement as farmers like other inhabitants of the country under the laws of the land. This agreement was not to have binding force until ratified by three-fourths of all the male adult members of the different bands of the Ute tribe, the ratification to be supervised by a commission which, after the completed ratification, was also to make the payments agreed upon and to superintend the settlement of the Indians upon the farm lands designated for them. This agreement was submitted to Congress with the draught of a bill to give it the force of law. Prompt action was repeatedly urged, so that its most impor-

provisions might be carried out before the winter season should set in; but action was had only after a delay of many weeks. The commission provided for by law, composed of Messrs. George W. Manypenny, John B. Bowman, John J. Russell, Alfred B. Meacham, and Otto Mears, proceeded to the Ute Reservation to carry the law into effect. In order to obtain the ratification of the agreement it was necessary to call together the Indians who were scattered over a large extent of country. The sudden and deplorable death of Chief Ouray, a man of advanced views, great sagacity, remarkable tact and noble impulses, indeed probably the wisest Indian of this generation, whose influence upon his people had always been in favor of peace, good order, and progress, seemed for a time to render the success of the labors of the commission doubtful. But the ratification of the agreement was finally signed by the requisite number of Indians within the limitation of time specified by the act of Congress. The commission reported that the Indians, presumably guilty of the murder of Agent Meeker and the agency employés, had fled beyond the boundaries of the United States. The payment of annuities due has been proceeded with according to law. It would have been possible to make the necessary preparations for the individual settlement of the Ute Indians upon the farm lands designated for them had not the winter season intervened. This delay is to be regretted, and I can only say that it would have been avoided had Congress acted as promptly upon the agreement as was repeatedly and urgently recommended by this department.

A new trouble threatened seriously to disturb peace and quiet on the Ute Reservation again, after the ratification of the agreement had been obtained, and everything seemed to favor a final and prosperous settlement of the trouble. On the evening of the 29th of September, a young Ute Indian, son of a chief, was killed by a young man named Jackson, belonging to a party of freighters. It has been alleged by some that the Indian fired first at the white men, and that Jackson killed him in self-defense. On the other hand, the report of Major Offley, Nineteenth Regiment United States Infantry, represents the conduct of the Indian as friendly and peaceable, and, in the language of Captain Pollock, Third United States Infantry, whom Major Offley quotes, calls the deed "a wanton and unprovoked murder of an Indian by a reckless, half-drunken teamster." Jackson was arrested, and, under the escort of three white citizens of Colorado and one Indian, he was to be taken to Gunnison City to be tried; but the party was intercepted on its way, by a number of Indians and white men; the prisoner was taken from them, and his fate is not known, although the probability is that he was killed. In Major Offley's report the opinion is expressed that this was done at the instigation of some white men, possibly freighters, who deemed the killing of the murderer of the young Indian necessary to protect themselves in the pursuit of their business from the possible revenge of the Indians. Captain Pollock calls this "a clear case of lynching, which,



as much as it might be deplored, is not an uncommon occurrence throughout the country in the midst of civilization and enlightenment." Great excitement ensued in the settlements near the Ute Reservation; and the trial of Mr. Berry, the United States Indian agent, was vociferously demanded on the ground that he, in confiding Jackson to the escort of three white men and one Indian, had deliberately betrayed him into the hands of Indians eager to avenge the death of one of their people. Mr. Berry was subsequently arrested by the United States marshal, and taken before the United States district court at Denver, where his case is now pending. Before his arrest he showed great skill and influence over the Indians, in keeping them quiet and preventing further disturbance on their part. It is to be hoped that the State and local authorities in Colorado will use their best judgment and endeavors to allay the excitement existing in that State, so as to restrain evil-disposed persons from invading the Indian reservation and provoking collisions with the Indians, which would be especially deplorable at a time when the so-called Ute problem is on the point of successful solution by just and peaceable agencies and in accordance with an agreement successfully concluded.

#### THE PONCAS.

The case of the Poncas has continued to be a subject of public as well as private attention, on account of the hardships suffered by that tribe in consequence of its removal from Dakota to the Indian Territory. I have repeatedly in my reports expressed the opinion that the Poncas had a serious grievance on account of that removal, and that a generous indemnity was due to them. I am free to say, also, that a clear knowledge of their case at the time of their removal, which happened at the very beginning of the present administration, would have induced me then to oppose it to the extent of the discretion permitted by existing law to this department in such cases. The question how that grievance was to be redressed admitted of two different answers. One was that they should be returned to Dakota and the other that their condition be made as comfortable and prosperous as possible on their new location in the Indian Territory. There were several reasons against their return to Dakota. Their lands in Dakota had, by the treaty of 1868, been ceded to the Sioux, who had been their old enemies, and whose hostile incursions in years past had called forth among the Poncas themselves a desire to get out of their way by removal. The great problem in the management of Indian affairs at that time was to insure the general pacification of the Sioux tribes, in all over 30,000 souls strong. The Sioux occupied the Ponca Reserve for some time in 1877, shortly after the removal of the Poncas to the Indian Territory had taken place. Two large Sioux bands, numbering over 13,000, are now permanently located in the southern part of the great Sioux Reservation, at a distance from the old Ponca Reserve, but within comparatively easy reach. The Poncas could

not be moved back to their old lands without a previous agreement with the Sioux. While it is said that the latter are now more favorably disposed toward the Poncas, and while the conduct of that branch of the Sioux Nation is now very satisfactory, yet it is also a matter of experience that old grudges among Indians, although smoothed over, are apt to be revived by reckless individuals among them, in which case the Poncas, numbering only a few hundreds, would be at a great disadvantage compared with their powerful neighbors. Moreover, Congress had granted neither authority nor money for the removal of the Poncas back to Dakota. I should willingly have recommended the passage of a law and appropriation to that end, there being no interest nor any pride of opinion in the Department that could possibly have prevented such a step—for in the very first report rendered by me after the removal of the Poncas, and after I had become fully aware of the whole character of the transaction, the wrong done to them was frankly acknowledged—had there not been other considerations of superior weight against it. The principal injury suffered by them immediately after their removal, by disease and the death of many of their people, could not be repaired. When they were once settled in the Indian Territory upon land which is acknowledged to be excellent for agricultural and herding purposes, and had made new beginnings in civilized pursuits and the promotion of their well-being, those beginnings would have been destroyed by a second removal, and the whole operation would have had to be repeated. It is but natural that frequent removals of an Indian tribe should have a disastrous effect upon their advancement in civilization and prosperity.

According to the latest reports, their condition is now very much improved. How much better they are situated in a sanitary point of view than immediately after their arrival in the Indian Territory appears from the fact that, according to the returns for the year just passed, there were during that year eleven deaths and fifteen births in the tribe, so that the Poncas have been actually increasing in numbers. Most of them are now living in houses, are tilling the soil, and have been provided with stock cattle for herding. They have school facilities for the education of their children. Their progress would have been greater had they not been kept in a state of restlessness by reports from the outside that they would soon be returned to Dakota, and that therefore they need not apply themselves to the improvement of their condition on the soil they occupy in the Indian Territory. Instead of benefiting them, such reports have evidently inflicted upon them an injury. Nothing would have been more apt to improve their health, raise their spirits, and promote their well-being than steady and fruitful work. That the Poncas feel this themselves appears from a petition which on the 29th of October they addressed to the Commissioner of Indian Affairs, and in which they say "that their young men are unsettled while they think they have a right to their land in Dakota," and that "their tribe will not be finally settled until they have a title to their

present reservation and have relinquished all right to their Dakota land." They therefore earnestly request that they be given an opportunity for "signing away all their right to all lands in Dakota and to obtain a title to their present reservation." They desire to visit Washington for the purpose of "convincing the government that it is their intention to remain where they are, and requesting the aid of the government in obtaining more teams, wagons, harness, and tools with which to work their land." This petition is signed by all the chiefs and headmen of the Ponca tribe, and it would seem to show that the Poncas themselves understand their own interests better than they are understood by some of their sincere but ill-advised friends. Their request "that the chiefs of the Ponca tribe be permitted to visit Washington the coming winter" for the purpose indicated in their petition has been complied with, and it is hoped that arrangements generally satisfactory will be arrived at.

But there is another reason why I could not conscientiously recommend the return of the Poncas to their old reserve in Dakota, and that reason is perhaps less appreciated by the general public than it is by those who bear the responsibility for the whole management of Indian affairs at large, and who have to take care of the welfare not of the Poncas alone, but of all the Indian tribes, of whom the Poncas form only a very small part.

It is a well-known fact that the Indian Territory is exposed to constant invasions on the part of white people who strive to possess themselves of certain unoccupied lands therein, which are held for Indian settlement in the future. To defeat such invasions, and to maintain the integrity of the Indian Territory, has been a subject of constant solicitude by the government; it required the greatest watchfulness and energy on the part of officers and troops of the United States in arresting and turning back the invaders, to prevent the success of those lawless attempts. Whatever the ultimate fate of the Indian Territory may be, it would be a great disaster to the Indians now inhabiting it, were the stream of immigration, which is constantly threatening to break its barriers, permitted to enter before the Indians are settled there in severalty, with such individual title to their lands as will stand under the protection of the laws and courts of the country in the same light and with the same security as the land titles of white people. The tracts in the Indian Territory mainly coveted by those who strive to enter without warrant of law, are held against intruders on the ground that they are reserved for Indian occupation according to the original intention. What the consequence would be if, just at the time when the struggle for the integrity of the Indian Territory is on our hands, the government itself organized an emigration of Indians from the Indian Territory, and from the vicinity of the same lands that are held for Indian settlement against intruders, it is easy to conjecture. If the Poncas were removed back to Dakota, nothing is more certain than that this very fact would make other Northern Indians who have been taken into the Indian Territory, restless with a desire to follow their example, such as the Northern Cheyennes.

and possibly the Pawnees. I could, therefore, not have recommended the return of the Poncas to Dakota without at the same time keeping in view the probable necessity of returning other Indian tribes from the Indian Territory to the region originally inhabited by them. This would, in all probability, result in an extensive evacuation of the Indian Territory, and just of that part of it which contains the lands coveted by the intruders, and which lands are held against them on the ground that they are reserved for Indian settlement. It is obvious that the evacuation by the Indians of the region held for Indian settlement, and defended on that very ground against intruders, would be apt greatly to encourage and stimulate the projects of invasion which, although repeatedly repelled, are pursued by evil-disposed persons with persistent activity. The defense of the Indian Territory against that invasion would inevitably become much more precarious, and the breaking down of all barriers before the Indian tribes inhabiting the Territory are prepared for such an event, would, in all probability, be most disastrous to them. While the original removal of the Poncas from the North to the Indian Territory was an injustice to them, yet, that removal and their settlement in the Indian Territory accomplished, the aspect of the question changed very materially, inasmuch as the measure intended to right their wrongs by their return, would be apt to bring a new wrong upon Indian tribes far more numerous, a wrong greater than the injury originally suffered by the Poncas themselves. These are the reasons why, although recognizing the hardships endured by the Poncas, I could not conscientiously recommend their return to Dakota. There is a bill now before Congress providing for that return. If it is to become a law, it should not be without a clear view of the probable consequences. Recommendation has repeatedly been made by this department that Congress provide an appropriation for the purpose of amply indemnifying the Poncas, and that recommendation is now urgently repeated.

#### VICTORIA'S BAND OF APACHES.

The long guerrilla warfare carried on by Victoria's band of hostile Indians in New Mexico has at last come to a close by the death of Victoria, and the destruction of the larger part of his followers on Mexican soil. In my last annual report, and that of the Commissioner of Indian Affairs, the circumstances which led to the outbreak of hostilities between Victoria's band and the forces of the United States were elaborately set forth. As appears therefrom those circumstances did not consist, as alleged in the report of a military officer, in the persistent efforts to remove Victoria and his followers to the San Carlos Agency, for while such a project was formerly entertained, it had been given up at the time when the outbreak occurred. Victoria had come on the 13th of June, 1879, with a small number of followers to the Mescalero Agency in New Mexico, and upon a conference with the Indian Agent, given his promise to stay there quietly. That promise had been accepted and arrange-

ments were in progress to bring to them their wives and children, who at that time were living on the San Carlos Reservation in Arizona. But the appearance of some officers of the law on the reservation, whom the Indians suspected of having come there for the purpose of arresting them under indictments found against them for horse-stealing and murder, Victoria and his men effected their escape, suddenly left the Mescalero Reservation, took with them other southern Apaches, and resumed their old marauding practices until after many fights and vicissitudes they came to their end. Some remnants of his band seem to be still at large, but it is thought that they can easily be overcome and caught, and that then peace will be restored on our southern frontier.

#### THE LEMHI AND FORT HALL INDIANS.

Congress at its last session passed an act providing for the settlement of the Lemhi Indians upon Fort Hall Reservation, and also for the cession of a part of that reservation to the United States in consideration of certain annuities to be paid to the Indians affected thereby, subject to the consent of the latter. I had a personal conference with the chiefs of the Lemhi and Fort Hall Indians at the agency of the latter in August last, in which a majority of the Lemhi Chiefs and headmen declared their unwillingness to abandon their present abode. Their consent to their removal provided for in the law not being obtained, no further steps were taken in that direction. The Fort Hall Indians, on the other hand, declared themselves satisfied with the arrangements made; and it will therefore be necessary so to change the law as to adapt it to this new state of circumstances, which is hereby respectfully recommended.

#### THE PI-UTES.

Early last winter Chief Winnemucca, his daughter, Sarah Winnemucca, and some headmen of the Pi-Utes, asked permission to come to Washington for the purpose of making certain arrangements for the permanent settlement of their people. That permission was granted and they represented that most of the Pi-Utes scattered over Nevada and Southern Oregon, as well as those settled on the Yakama Reservation in Washington Territory, were desirous to move to the Malheur Reservation in Oregon, for the purpose of cultivating the soil and establishing permanent homes. They received the assurance that this department would facilitate such a movement, provided the Indians concerned really desired it, and that in such case their settlement upon the Malheur Reservation would be aided in every possible manner, but that those Pi-Utes who were at present working for wages, or who were settled on the Yakama Reservation or other lands, and did not desire to remove to the Malheur Reservation, should in no way be forced to do so. On the occasion of my visit to the Pyramid Lake Reservation in Nevada, where I met several chiefs



and headmen of the Pi-Utes, I discovered that among those Pi-Utes who were scattered among the white population and working for wages the desire to remove to the Malheur Agency did not exist, as had been represented to me; that, on the contrary, they wished to continue in their present condition. A great many of them are employed by white people in chopping wood or doing other jobs of work, for which they are sufficiently paid to make a living; thus they appear to be self-supporting. I met many white men among whom those Indians lived, who declared themselves well satisfied with their presence, and desired that they should stay. Information was also received from Washington Territory, through General Howard, as well as from Agent Wilbur, that the removal of the Pi-Utes—who in consequence of the Bannock war had been taken to the Yakama Reservation—from their present abode to the Malheur Agency would be attended with great danger to the Indians, as well as lead to the breaking up of those beginnings in agricultural work which they had made on the establishment of homes at Yakama. Under such circumstances it was thought best to give up the project of their removal from the Yakama Agency, and the settlement of the other Pi-Utes on the Malheur Reserve as an improper experiment. Arrangements have been begun to establish for the Pi-Utes living in that neighborhood a boarding school at the Pyramid Lake Agency, where their children can receive the benefits of education, which otherwise would not be easily obtainable by them. A special agent was sent to the Malheur Agency for the purpose of ascertaining whether that establishment could not be dispensed with, and its business is now being wound up.

#### THE CROWS.

With a delegation of the chiefs and headmen of the Crows in Montana, who visited Washington last winter, an agreement was made, providing for the relinquishment of a part of their reservation not used by the Indians, but valuable for its mineral resources; in compensation therefor an annuity was agreed upon to be paid to the Crow Indians. When the chiefs laid this agreement before their people in order to obtain their consent, the latter insisted upon a modification of the agreement, somewhat changing the boundaries of the ceded tract. It is thought that this change will be mutually advantageous, and the bill now before Congress giving to the agreement the force of law should be altered in that respect. While visiting the Crow Reservation, I had conferences with many of the chiefs and headmen of that tribe, who all expressed themselves satisfied with this arrangement, and also desirous of having lands allotted to them in severalty and to receive title therefor. I informed them that their wishes in that respect coincided entirely with the policy of this department, and would be promptly complied with as soon as Congress should have passed a bill submitted to it, giving the department the necessary authority to that end.

## THE SIOUX.

Of all Indian tribes, the Sioux Nation has for a long time been regarded as the most important, not only on account of their numerical strength and warlike qualities, but also on account of their geographical location and the many conflicts which for years have disturbed our relations with them. One after another the different bands composing that nation have been pacified, until finally only one of their prominent men, Sitting Bull, and with him a number of restless spirits belonging to different bands, appear to be the only nucleus of a hostile organization. When this administration came into office Sitting Bull with his warriors had fled across the line of the British possessions. A commission, with General Terry at its head, was sent there with the offer that the hostiles might return to the United States if they would give up their arms and horses and consent to be distributed among the different Sioux agencies. That offer was rejected, and it was then hoped that Sitting Bull and his followers might be kept on British territory without a further serious interruption of the peace of our northern frontier. But it soon appeared that the British authorities could not, at any rate did not, keep Sitting Bull and his band of hostiles on the northern side of the line, and that the latter, driven by want, would come upon the territory of the United States for the purpose of hunting, on which occasions they caused much annoyance to the white settlers as well as to our friendly and peaceable Indians. In September last I visited Fort Keogh for the purpose of informing myself of the condition of things in that region, and it became clear to me that Sitting Bull and his band, although they had been repeatedly driven back, would remain a cause of disquietude in the Upper Missouri country until the British authorities could be induced to remove them into the interior of the British possessions far from the American line and there subsist them, which hope it seemed useless to entertain any longer, or until on this side of the line their surrender to the authorities of the United States could be effected. As at last the latter seemed to be the only solution of the problem, measures were pushed to effect the disintegration of that hostile band, and to bring them gradually under the control of this government. A large number of them have surrendered to the military posts near the northern frontier, especially at Fort Keogh, and under the direction of General Miles have been successfully set to work there. It is hoped that the small remnant of them still under the control of Sitting Bull will gradually follow that example. When that is accomplished, measures are to be taken so to locate them that they may become permanently settled and cease to be a disturbing element.

The other bands of the Sioux Nation, comprising nearly nine-tenths of its whole numerical strength, located at different agencies in the northern, eastern, and southern part of Dakota, have made very en-

couraging progress in the pursuits of civilized life. Many of them have devoted themselves to agriculture, herding, freighting, and mechanical pursuits with remarkable energy and success.

At the Santee, Sisseton, and Devil's Lake Agencies they are virtually self-supporting. They are located in severalty, living in houses, wear white man's dress, are well provided with farming implements and stock cattle, and their crops during the past year will average ten bushels of wheat, five bushels of corn, and sixteen bushels of vegetables to each member of the tribe. They are still receiving some aid from the government, but are at the same time investing their surplus crops largely in farming implements, cattle, and other appliances of civilized life. At Cheyenne River, Crow Creek, Standing Rock, and Lower Brulé, where a few years ago the progress of the Indians was seriously retarded by the Sioux war, they have erected 718 houses, broken a large tract of land, and this year raised 41,000 bushels of wheat and corn and 12,000 bushels of vegetables. The Ogalala and Brulé Sioux, whose chiefs, Red Cloud and Spotted Tail, are well known, removed to the locations they occupy at present in 1878. They now have 700 log houses, cultivate 2,200 acres of land, own 300 mules, 5,600 head of cattle, and 280 swine, in addition to many thousands of horses. This year their crops were seriously injured by an early drought, which caused great disappointment, but they have bestowed great care upon their stock cattle, and should be encouraged by the government in this respect as much as possible. Instead of living together as formerly in crowded camps and villages, they are now scattering over a large extent of ground, locating farms and building homes upon them. Their success in the pursuit of freighting with their own horses has been particularly remarkable. Their conduct, with the exception of one or two inconsiderable disturbances, has been peaceful and satisfactory in every respect. One of these occurrences is worthy of special notice. A small party of Brulé Sioux, consisting of six young men, stole some horses and shot a white man in Nebraska. Although they were all great favorites with the chiefs and headmen, they were without resistance arrested by the Indian police and turned over to the civil authorities for trial. In the first week of October I received a letter from Chief Spotted Tail inclosing a check for \$332.80, with the request to employ that money, which had been collected by the Indians among themselves, in procuring an attorney to assist the six young Indians, so that while they should be punished if guilty, they might if not guilty have "the chance of a white man" for acquittal. This is one of the signs indicating that the respect for law and authority, and a desire to accommodate themselves to the white man's ways, is rapidly growing among the same Sioux, a large part of whom were still in arms against the government a comparatively short time since, and who, two years ago, according to the predictions of some, could never be depended upon as peaceable Indians "unless they received another thorough whipping."

## THE INVASION OF THE INDIAN TERRITORY.

Attempts by evil-disposed persons to invade the Indian Territory and to take possession of certain unoccupied lands there have so far been successfully frustrated by the prompt action of the government, but they have been as persistently repeated. It is reported that another attempt is in preparation now. The military forces of the United States in the Territory are instructed to arrest the intruders and to take proper measures to bring them to justice as they have done heretofore. But it is evident that the penalty imposed upon repeated intrusion into the Indian Territory, which penalty consists in a mere fine and is difficult of enforcement, is not sufficient to deter lawless characters from such undertakings. I concur with the Commissioner in recommending that a law be passed adding the penalty of imprisonment to that of a fine. If this is done invaders will know that such attempts are not without serious risks to them.

In conclusion I desire to express to the War Department my grateful acknowledgments for cordial and prompt co-operation whenever the exigencies of the service called for it.

## PUBLIC LANDS.

During the last fiscal year public lands were disposed of as follows:

	Acres.
Cash sales.....	850,740.63
An increase of 228,166.67 acres on the sales of the previous year.	
Homestead entries.....	6,045,570.60
An increase of 785,459.31 acres.	
Timber culture entries.....	2,193,184.12
A decrease of 573,389.81 acres.	
Approved to States as swamp.....	3,757,888.90
An increase of 3,682,500.91 acres.	
Grants to railroads.....	1,157,375.01
An increase of 879,040.90 acres.	
Grants to wagon roads.....	19,485.14
Agricultural college scrip locations.....	1,280.00
An increase of 320 acres.	
Located with military warrants.....	88,522.00
An increase of 37,702 acres.	
State selections:	
	Acres.
School indemnity.....	206,089.06
Internal improvements.....	223,140.80
Agricultural colleges.....	2,360.46
Public buildings.....	3,599.67
	<hr/>
	435,189.99
Scrip locations:	
Sioux half-breed.....	4,151.49
Chippewa half-breed.....	3,040.00
Valentine.....	1,720.00
Cole's.....	1,514.27
Choctaw.....	480.00
	<hr/>
	10,905.75
An increase of 6,249 acres.	

	Acres.
Scrip locations under the acts of June 2, 1858, and June 22, 1860.....	195,516.92
An increase of 107,943.48 acres.	
Donation claims.....	36,552.50
Under settler's relief act of March 3, 1875.....	160.00
Total .....	14,792,371.65

A quantity greater by 5,458,988.36 acres than that disposed of the preceding year.

The cash receipts were \$2,290,161.60, an increase of \$407,048.04.

During the fiscal year 15,699,253 acres of public lands were surveyed, and 652,151.37 acres of private land claims, an increase of 7,253,471 acres. The total area of public lands surveyed up to 30th June last is 752,557,195 acres, leaving still unsurveyed an estimated area of 1,062,231,729 acres.

#### PUBLIC LANDS COMMISSION.

The Public Lands Commission, appointed in conformity with the act of March 3, 1879, and consisting of the Commissioner of the General Land Office, the Director of the Geological Survey, and Messrs. John A. Powell, A. T. Britton, and Thomas Donaldson, was duly organized on July 8, 1879, and submitted to me on the 24th of February, 1880, its preliminary report, which I had the honor to transmit to you on the 24th of February, 1880, for submission to Congress.

In compliance with the provisions of the law, the work was subdivided into two principal parts—first, the codification of the present laws relating to the survey and disposition of the public domain; and, second, investigation of the whole subject, with a view to recommend new legislation.

The preliminary report above referred to contains a carefully-prepared bill providing for the survey and disposal of the public lands of the United States.

Before preparing the bill the commission distributed a circular letter making inquiries of various intelligent persons throughout the States and Territories as to what legislation might be required regarding the disposal of the public domain.

This circular letter contained, among many others, inquiries in regard to rainfall, irrigation, water rights, the area of pasturage, timber, and mineral lands; also as to the climatic conditions in various localities, and so on. The commission visited all the Western States and Territories, and as much as possible personally informed themselves upon these various topics on the ground.

The proposed legislation as embodied in the bill accompanying the report is predicated upon the information elicited by the circular, as well as personal inspection and investigation.

The importance of the passage of this or some similar bill by Congress cannot be overestimated. Existing laws for the survey and disposal of the public domain, were enacted mainly while the government was disposing of public lands east of the Missouri River. The climate, soil,



and products of the lands west of the 100th meridian are so entirely different from those east of it, as to require legislation specifically applying thereto. This whole subject is so fully discussed by the commission, and by the persons answering their circular letters of inquiry, which has been before reported to Congress, that I deem no further reference to that subject necessary in my report.

The codification by the commission of nearly three thousand acts of Congress which had been enacted since the beginning of the public land system has been a work of very great and painstaking professional labor, and will be submitted to Congress by the 1st of January next. The work will be comprised in three volumes of several hundred pages each. These will contain a statistical history of the public land system, a codification of the existing laws, general and permanent in their character, and a compilation in chronological order, State by State, of all local and temporary legislation affecting the titles therein. To these will be attached a table of cited cases referring to the construction these laws have received by judicial and executive authorities. Easy reference in compact form will thus be accessible with regard to laws and decisions applicable to the country at large, as well as to those upon which the titles in each State may severally depend. An analysis of the military reservations in the United States, an index to all Indian treaties, and much other valuable information not heretofore compiled, will also be presented.

Early action upon the bill drafted by the Public Lands Commission and submitted to Congress at its last session is urgently demanded by the public interests as the settlement of our Western Territories progresses, and I beg that the attention of Congress be invited to that important subject.

#### PRIVATE LAND CLAIMS.

Sections 206 to 219, inclusive, of a bill reported by the public lands commission, and printed as House bill No. 4805, now pending before Congress, are liberal translations of a bill introduced in the Senate during the present Congress by Hon. George F. Edmunds. This bill provides for settlement of private land claims in all the territory derived from Mexico, except in California.

The present basis for the settlement of these claims is the 8th section of the act of July 22, 1854, which makes it the duty of the surveyors general to report the origin, nature, and extent of all claims to lands, under the laws, usages, and customs of Spain and Mexico, and to report his conclusions to Congress for its direct action upon the question of confirmation or rejection.

The law is singularly defective in the machinery for its administration, and imposes no limitation of time in the presentation of claims, and no penalty for failure to present them. Its operation has been a failure, amounting to a denial of justice, both to claimants and to the United States.

After a lapse of nearly thirty years, more than one thousand claims have been filed with the surveyors-general, of which less than 150 have been reported to Congress, and of the number so reported Congress has finally acted upon only 71. The construction of railroads through New Mexico and Arizona, and the consequent influx of population in those Territories, renders it imperatively necessary that these claims should be finally settled with the least possible delay. I have, therefore, the honor to recommend that the attention of Congress be called especially to this subject, with a view to securing action upon the claims pending before it, and upon the pending bill providing for the settlement of the remaining claims.

#### REDWOOD AND BIG TREES.

In my last annual report I called attention to the fact that the waste and destruction of the redwood and the "big trees" of California have been and continue to be so great as to cause apprehension that in the course of years these magnificent species may entirely disappear unless some measure be taken to preserve at least a portion of them. I recommended at the same time that the President be authorized to withdraw from sale or other disposition an area at least equal to two townships in the coast range in the northern and an equal area in the southern part of the State of California upon which these interesting trees grow. That bill has not yet been acted upon, and it seems important that if any measure for the preservation of these species of trees is to be taken at all, it should be done as soon as possible. I therefore once more commend this subject to the attention of Congress.

#### TIMBER-LANDS.

In my first annual report I had the honor to present to you in 1877, and every successive year thereafter, I invited attention to the extensive depredations committed on the timber-lands of the United States, and the rapid and indiscriminate destruction of our forests, especially in the South and in the States and Territories of the West. Referring to the warning example furnished by other parts of the world, where the disappearance of the forests had been followed by the most deplorable consequences: the drying up of springs; the irregularity of the water-supply in navigable rivers; the frequency of destructive freshets and inundations; the transformation of once productive and flourishing agricultural districts into barren wastes, almost uninhabitable to man—I showed that the same results would inevitably befall certain parts of this country, if so short-sighted and reckless a practice be persisted in as is now prevailing. I set forth as a universally acknowledged fact that especially in our mountainous regions the stripping of the slopes of their timber would be an irreparable injury, inasmuch as the rainfall and the water from melting snows would wash down the soil, transform brooks and rivulets running regularly while the forests stand, into raging torrents

at certain seasons, and sweeping masses of gravel and loose rock into the valleys below, apt to render them incapable of cultivation, while on the mountain sides the forests once destroyed would in most cases never grow up again. Measures instituted at the beginning of this administration to discourage and lessen such evil practices by bringing large depredators to punishment and seizing quantities of timber taken from the public lands for mercantile purposes, were at first received with widespread discontent and opposition.

Gradually the wisdom of the policy which dictated such measures began to be recognized even in many of the districts where the operations of this department had taken place. In every one of my reports I urged this important subject upon the attention of Congress and the country, and now it may be observed that there is scarcely a responsible journal in the United States that has not during the last two years from time to time published articles on the injury inflicted upon the country by rapid and indiscriminate destruction of its forests and the necessity of preserving a fair proportion of them. Many letters from the Western States and Territories are coming to this department, urgently asking that existing evils in this respect be remedied by proper changes in the laws. While this wholesome sentiment upon this important question is rapidly growing up, I regret to say that in spite of the repeated recommendation of the passage of a law to facilitate the prevention of the wasteful devastation of the public timber-lands, and to enable the government to dispose of timber to settlers and miners, as well as for legitimate mercantile purposes under such regulations as would prevent the indiscriminate and permanent destruction of our forests, almost all the legislation that has been had upon this subject consisted in acts relieving those who had committed depredations in the past of their responsibility, and protecting them against the legal consequences of their trespasses. Such laws authorizing the composition of past offenses, might not have appeared objectionable in themselves had they been accompanied by other legislation regulating the cutting of timber on the public lands or the selling of timber from them in such a manner as to render possible at the same time the preservation of such a proportion of the forests as appears necessary for the public good ; but without such additional provisions they constituted only an encouragement to trespassers, inasmuch as they were apt to encourage the hope that at a future time similar acts condoning their offenses would be passed. In the absence of the desired legislation nothing remained to this department but to make every possible effort even under such discouraging circumstances, at least to limit the extent of the work of lawless and dangerous destruction, as far as it could be done by executive action with the small means at our disposal.

When I took charge of the Interior Department the only regulation with regard to this subject then in force consisted in a general circular issued on the 24th of December, 1855, by the then Commissioner of the

General Land Office. In this circular the Commissioner referred to the various opinions of Attorney-Generals construing the act of March 2, 1831, entitled "An act to punish offenses committed in cutting, destroying or removing live-oak and other timber or trees reserved for naval purposes"; and also the decision of the Supreme Court of the United States in the case of the United States *vs.* Ephraim Briggs (9 Howard, page 3, 1851), in which the Supreme Court decided that the said act authorized the prosecution and punishment of all trespassers on the public lands for cutting timber whether such timber was fit for naval purposes or not. This circular was addressed to the registers and receivers of local land offices throughout the United States charging them with the duty of investigating depredations and prosecuting trespassers; but it was found that the sums recovered in accordance with this circular were very small compared with the damages committed by trespassers upon the public lands during the period intervening between the publication of the circular and the incoming of this administration, and that the evil had grown rather than diminished in extent.

The present Commissioner of the General Land Office having submitted to me a report upon this subject, I addressed to him, on the 5th day of April, 1877, a letter expressing the opinion that the system theretofore adopted had failed to accomplish the desired purpose; that the interest of the government demanded an entire change in the mode of procedure, and that more effective measures should be adopted to compel an observance of the law, in order that the public lands might be protected from waste and spoliation. I further directed that agents should be employed for this purpose by the Commissioner of the General Land Office to be borne on his rolls as clerks or employés; and to be detailed for special duty to act under his instructions in ascertaining when, where, and by whom depredations had been committed on the public lands, and to report the facts in each case. Secondly, that if upon examination of the reports so obtained the facts elicited in any case were found to warrant the institution of legal proceedings to punish the trespassers, or to collect damages for the waste already committed, or both, report should be made to this department with the opinion of the Commissioner thereon, in order that such further proceedings might be had in the premises as the case required. Thirdly, that no agent so employed should be permitted to make any compromise for depredations on the public lands, but if any propositions for settlement were submitted to them, the agents were to be instructed to report the same to the Commissioner of the General Land Office, with a full statement of the facts in the case, showing the nature and extent of said depredations, when and by whom committed, the quantity and value of the timber, when cut, and the value of the land in its present and former condition, all of which, together with the opinion of the Commissioner thereon, was to be transmitted to this department for further consideration. Fourthly, that if in any case the emergencies should seem to require more prompt action than contemplated in the

above directions in order to arrest the offender or to secure the government for the damages suffered, the agents were instructed to apply to the United States district attorney for the district in which the waste was committed to institute the proper legal proceedings for that purpose, which course, however, should be taken only in cases where the evidence was clear and indisputable. This letter has since formed the basis of all action of this department, having in view the prevention of trespasses upon the timber of the public lands and the collection of the value of the timber cut and the prosecution of the offender.

The appropriations for keeping these special agents in the field were very limited; for the year ending June 30, 1877, \$12,500; for the year ending June 30, 1879, \$25,000; and for the year ending June 30, 1880, \$40,000; making a total down to June 30, 1880, of \$77,500 since the inauguration of the present policy. Considered from the standpoint of a mere financial transaction, the operations of the department have been very successful. During the twenty-two years from December 24, 1855, to the 5th of April, 1877, while all action as to timber depredations took place under the circular of 1855 first mentioned, the sums recovered and turned into the Treasury amounted in gross to \$248,795.68. During three years and three months from April 5, 1877, to the 30th of June, 1880, the proceeds from the same source amounted to \$242,376.68 actually collected. It must be considered, however, that the amount for which judgment has been obtained—but not yet collected—is about as much more. The proceeds of the last three years and a half have therefore been much larger than those of the twenty-two years preceding.

The net money thus realized, however, forms no considerable and certainly not the most important part of the benefits derived from the appropriations made by Congress for that purpose. The repression and prevention of depredations on the public timber-lands on the Atlantic, Pacific, and Gulf coasts constitutes the chief and most beneficial result. At the time of the inauguration of the present system the export trade in timber had grown to enormous proportions on those coasts. Whole fleets of vessels entered the harbors of Puget Sound, the Columbia River, Pensacola, Sabine Pass, Atchafalaya, and places along the shore, whose cargoes consisted mainly of timber taken from the public lands, for which no compensation was paid to the government, and which was not used for the domestic or mining purposes of our own people, but for export to foreign countries. If this trade has not been entirely arrested, it has at least been very materially diminished. From the best sources of information at my command, I am able to report that little if any timber unlawfully taken from the public lands is now being shipped to foreign countries. While it was not the policy to interfere with the necessary use of timber by the settler or miner for domestic use or purposes immediately connected with mining business, it was thought but just to the people of the United States that extensive trading in stolen timber by large firms, and espe-



cially the exporting to foreign countries of timber unlawfully taken from the government lands to the detriment of the public interest, should be effectually arrested. Whatever our success in this respect may have been so far, it is certain that the evil will spring up again if the efforts of the government to arrest it should be in the least relaxed in the future, or if Congress should fail, by leaving the laws of the country in their present condition, to show an active sympathy with this policy. To that want of proper legislation I have each successive year called attention in my reports to you, as well as by direct appeals to Congress. The main features of the legislation urged by this department are very simple. They consist in two propositions: First, that the government should be authorized to sell timber from lands principally valuable for the timber growing upon them—that is to say, not agricultural nor mineral—at reasonable, perhaps even at merely nominal, rates to supply all domestic needs and all the wants of local business enterprise, as well as of commerce, the latter so far as compatible with the public interest; and, secondly, that these sales of timber be so regulated as to preserve the necessary proportion of the forests on the public lands from waste and indiscriminate destruction. Such a policy can, in my opinion, be carried out without great cost, with a simple machinery, and in perfect justice to the wants of settlers and the business enterprises of the country. It is virtually the policy proposed to Congress by the Public Lands Commission in the report and the bill submitted to Congress at its last session.

I would also urge once more upon Congress the importance of the passage of a law, repeatedly recommended in my reports, prescribing a severe penalty for the willful, negligent, or careless setting of fires upon public timber-lands of the United States, and also providing for the recovery of damages thereby sustained. The extensive as well as wanton destruction of the timber upon public lands, by the willful or negligent and careless setting of fires by hunters or prospectors or tourists, is a matter of general notoriety. The destruction caused in this way from year to year is almost beyond calculation. While in several, if not in all of the States, such acts are made penal offenses by statute, no law of the United States provides specifically for their punishment when committed upon the public lands. If forest-fires in the Western States and Territories cannot be wholly prevented by such a law, the punishment of some offenders here and there will certainly make the class of persons most liable to commit such offenses more careful, and thereby at least limit the extent of the immense damage now caused by negligence or recklessness.

The question of the preservation of forests in just proportion to the area of the country is engaging the attention of prudent men in every civilized nation. By competent authorities it is estimated that this proportion should be about one-fourth of the whole. In some foreign countries the injury caused by the barbarous ignorance and improvidence of

past times has become already too great to be repaired, and the evil consequences are keenly felt. In the United States the consumption of timber is enormous and rapidly increasing. It is in the nature of things that where timber is taken from the public lands without restraint the process is attended with the most reckless waste. No attention is paid to the preservation of young trees or of anything that is not immediately used. . What is looked upon as everybody's property is apt to be in nobody's care. Thus, our forests are disappearing with appalling rapidity, especially in those parts of the country where they will not renew themselves when once indiscriminately destroyed. Like spend-thrifts, we are living not upon the interest but upon the capital. The consequences can easily be foreseen. They will inevitably be disastrous, unless the Congress of the United States soon wakes up to the greatness of the danger and puts this ruinous business upon a different footing by proper legislation, either according to the principles advocated by this department and the Public Lands Commission, or upon others that may be found equally effective. The action of the government will apply only to the public lands; but those portions of the country in which the great body of the public lands is situated stands most in need of speedy and energetic action. I have considered it my duty to call attention to this subject upon every proper occasion, and that duty has been performed. All further responsibility will rest with the legislative branch of the government. It is to be hoped that the voice of warning will be heeded before it is too late.

#### BUREAU OF RAILROAD ACCOUNTS.

The report of the Auditor of Railroad Accounts, herewith presented, gives the operations of his office during the year ending June 30, 1880, under the law relating to indebted Pacific railroad companies and certain land-grant railroads.

The Auditor and railroad engineer made two inspections of railroad property—one during the months of August and September, 1880, the detailed results of which are embodied in his report. About 6,655 miles of railroads, coming under the operations of the bureau, have been inspected.

The Auditor reports a gratifying improvement in the condition of railroad property, more especially in that of the Union and Central Pacific Companies. The largely increased earnings of the companies have enabled them to maintain and improve their property to a much greater extent than heretofore.

Among the properties included in the inspections, aside from the Union Pacific and Central Pacific, were those of the Southern Pacific, Atlantic and Pacific, and Northern Pacific Companies, in all of which the government is more or less interested, either as creditor or otherwise. They are all making increased earnings, although rates both for freight and passengers have been reduced, and it is believed that as the country

west of the Missouri River fills up there will be remunerative business enough for each one of them.

Particular attention is invited to the remarks of Mr. Nichols, the railroad engineer, in regard to the important subject of railroad accidents and their prevention, and the statistics furnished relative thereto.

As to the large increase of business on the railroads of the United States, the Auditor remarks that it has been mainly on the railroads of the Middle, Western, and Southwestern States, business on the railroads of the New England and Southern States not having materially increased. A comparative statement of the business of many principal lines east and west of the Mississippi River is also submitted.

The passenger traffic on the Union Pacific, Central Pacific, and Kansas Pacific Railroads reached its maximum in 1875, since which time it has greatly decreased, while the earnings for freight have continued to grow.

The business of the Sioux City and Pacific and Central Branch Union Pacific Railroads has increased to such an extent that an annual payment can be made hereafter by those companies on account of "5 per cent. of net earnings," to be applied in liquidation of their debt due the United States.

Attention is called to the fact that many of the roads included in the act creating the bureau have neglected to furnish the reports called for; and it is suggested that patents for lands be refused to such companies as do not comply with the law.

The total amount of the "five per centum of net earnings" of the subsidized Pacific Railroads to December 31, 1879, has reached the sum of \$5,355,150.08, being an increase since last report of \$638,884.85, while the debt of the same companies for bonds issued is as follows:

Total debt, principal and interest, to June 30, 1880 .....	\$112,213,373 30
Total credits, transportation and money in Treasury, June 30, 1880...	15,385,261 13
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Balance due the United States .....	96,828,112 17

The Auditor gives detailed statements in regard to the sinking funds of the Union Pacific and Central Pacific Companies, showing the character and amount of investments; and, in view of the many difficulties attending a fair and equitable investment of these moneys, suggests that amounts covered into the sinking funds be credited, with interest at 6 per cent. per annum, payable semi-annually. The Auditor also calls attention to the delay in the settlement of the companies' accounts for transportation, the balance of unsettled accounts being so large as to be a serious loss to the companies in the matter of interest.

The Auditor publishes in his report departmental circulars affecting Pacific and other railroads, laws of the United States affecting railroads and telegraphs, and recent decisions of the Supreme Court relating to the same subjects.

Under the recent decision of the Supreme Court of the United States

in the case of *Thomas vs. West Jersey Railroad Company*, any unauthorized lease entered into by railroad companies must be canceled.

Another important decision is that of the Court of Claims, No. 11471, in the case of *The Atchison, Topeka and Santa Fé Railroad Company vs. The United States*, in which the court holds that 50 per cent. of its gross earnings is a fair compensation to the company for the actual cost of transportation and such part of the profits upon transportation as are earned by the company from the government.

Particular attention is called to the circular of the Treasury Department dated November 29, 1879, giving notice to all government officers and employes that *no money payments for transportation* can be made to Pacific Railroads which have been subsidized with bonds.

On January 26, 1880, articles of consolidation were filed in this department in accordance with law, in which the Union Pacific Railroad Company, the Kansas Pacific Railway Company, and the Denver Pacific Railway and Telegraph Company are consolidated under the name of "The Union Pacific Railway Company."

#### THE UNION PACIFIC RAILWAY COMPANY.

The property and business of the Union Pacific Railway Company is reported on in full, and has been found in good condition, with business increasing. Under the sinking-fund act of May 7, 1878, the "25 per cent. of net earnings" found due the United States by the company amounts to \$1,532,916.12.

The Union Pacific Railway Company furnishes reports from which the following statements are derived :

Length of line subsidized with bonds.....	1,432.62
Length of line subsidized with lands.....	1,783.17
Leased to Central Pacific.....	5.
Operated by Union Pacific.....	1,809.84
Stock subscribed .....	\$50,762,300 00
Stock issued.....	50,762,300 00
Par value .....	100 00
United States subsidy bonds.....	33,539,512 00
Other funded debt.....	82,434,357 62

Total stock and debt.....	166,736,169 62
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Floating debt and interest account to June 30, 1880, on subsidy and other bonds.....	\$26,429,551 57
Bonds and stock of, and investments, in other companies.....	15,338,453 94

Material on hand.....	\$1,850,669 82
Cash on hand .....	2,047,329 79
Accounts receivable .....	6,743,919 01
	10,641,918 62

Cost of road and equipment and Missouri River bridge, per company's books.....	\$156,522,642 20
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The following statement shows the earnings of the Union Pacific Railroad Company prior to consolidation, for seven months ending January 31, 1880:

Passenger.....	\$1,867,055 36
Freight.....	5,789,268 18
Miscellaneous.....	624,237 78
	<hr/>
	8,280,561 32
Operating expenses.....	3,048,029 14
	<hr/>
Net earnings.....	5,232,532 18

Since the consolidation the Union Pacific Railway Company has had earnings to June 30, 1880, as follows:

Passenger.....	\$2,579,188 57
Freight.....	5,644,933 73
Miscellaneous.....	751,884 80
	<hr/>
Total for 5 months.....	8,976,007 10
Operating expenses.....	4,312,500 15
	<hr/>
Net earnings.....	4,663,506 95
	<hr/>
Interest paid.....	\$3,390,595 36
Dividends paid.....	2,489,134 50
Acres of land unsold.....	15,933 007.28

Under the act of May 7, 1878, the earnings for the year ending December 31, 1879, have been as follows:

Ordinary net earnings.....	\$7,768,224 47
Less interest on first-mortgage bonds.....	1,636,559 99
	<hr/>
Net earnings under the law.....	6,131,664 48
	<hr/>
One-half transportation, applied to interest.....	\$574,844 01
One-half transportation, applied to sinking fund.....	574,844 00
Five per cent. under acts of 1862 and 1864, applied to interest.....	306,583 22
Additional payment under act May 7, 1878, for sinking fund.....	76,644 89
	<hr/>
Total, 25 per cent: of net earnings to December 31, 1879.....	1,532,916 12

#### CENTRAL PACIFIC RAILROAD COMPANY.

The property of this road is referred to in detail by the railroad engineer, and is in good condition and well maintained. The company has opened a new and shorter route from Sacramento to San Francisco, via Benicia, over which the bulk of the overland traffic is now done. In view of the fact that this is not a subsidized road, and that the debt due to the United States by this company is still quite large, the Auditor questions whether two or three hours quicker transportation of the mails is more to be considered than the retention of a greater or less proportion of compensation, for carrying the mails, to be applied on the



## REPORT OF THE SECRETARY OF THE INTERIOR.

debt. When the junction of the lines of this company from effected with those of the Atchison, Topeka and Santa Fé Co New Mexico, the diverted traffic will doubtless considerably amount to be applied on the debt due the government by both and the Central Pacific Railroad Companies.

The company is making many important improvements in property—new car-shops and other buildings at Ogden; new passenger freight depots at Sacramento; extensive renewals in the snow and a costly permanent embankment for a wharf and tracks at instead of the present pile and trestle work.

This company also leases and operates 550 miles of the Southern Pacific Railroad.

Under the sinking-fund act of May 7, 1878, the "25 per cent earnings" found due the United States by this company to 31, 1879, amounted to \$899,563.92.

The following statements are taken from reports furnished by the company:

The number of miles subsidized is.....	
The number of miles owned is .....	
The average number of miles operated during the calendar year of 1879 was.....	
Locomotives owned, 226; leased, 48; total.....	
Passenger cars owned, 261; leased, 37; total.....	
Baggage, mail, and express cars owned, 56; leased, 12; total.....	
Freight and other cars owned, 5,311; leased, 894; total.....	
Stock subscribed.....	\$6
Par value of shares.....	
Stock issued.....	50
Increase of stock during the year.....	
<hr/>	
Subsidy bonds outstanding.....	\$2
Funded debt.....	5
Floating debt.....	1
Interest due and accrued on funded debt.....	
Balance of interest due and accrued on United States bonds.....	2
<hr/>	
Total debt.....	11
<hr/>	
Total stock and debt.....	\$17
<hr/>	
Cost of road proper.....	\$13
Equipment.....	
Real estate.....	
<hr/>	
Total cost of road and equipment, &c.....	14
<hr/>	
Cash, materials, and sinking funds.....	\$
Bonds and stocks.....	
Miscellaneous investments.....	
<hr/>	

For year ending June 30, 1880 :

Passenger earnings.....	\$5,235,573 62
Freight earnings.....	10,900,932 47
United States mail.....	488,610 32
Miscellaneous earnings.....	1,177,331 75
<b>Total.....</b>	<b>17,802,448 16</b>
Operating expenses and rentals .....	11,618,830 55
<b>Ordinary net earnings .....</b>	<b>6,183,617 61</b>
Interest paid.....	\$3,781,825 96
Dividends paid.....	\$1,628,265 00
Acres of land unsold.....	10,995,865 46

#### CENTRAL BRANCH UNION PACIFIC RAILROAD.

Since the Auditor's last report, important changes have occurred in the affairs of the company owning this road. The engineer reports its property in good condition, with large additions to the equipment during the year. This road, with the leased lines controlled by it, is now operated by the Missouri Pacific Railway Company.

From reports made, the following statements are derived :

Miles owned and subsidized.....	100
Miles leased.....	158
Stock issued .....	\$1,000,000 00
Subsidy bonds.....	1,600,000 00
Funded debt .....	2,225,218 14
Floating debt .....	569,630 45
Interest on funded and floating debt.....	5,221 87
Interest on subsidy bonds.....	1,207,259 66
<b>Total debt.....</b>	<b>5,601,418 76</b>
Stock and debt.....	\$6,601,418 76
Cost of road and equipment.....	3,962,974 75
Passenger earnings for year ending June 30, 1880.....	\$208,866 26
Freight earnings .....	754,757 75
Miscellaneous earnings.....	54,260 38
<b>Total .....</b>	<b>1,107,884 39</b>
Operating expenses.....	774,384 22
<b>Net earnings.....</b>	<b>333,500 17</b>

#### KANSAS PACIFIC RAILWAY.

The Kansas Pacific Railway Company was consolidated with the Union Pacific Railroad Company, January 26, 1880. This report is therefore for the seven months ending January 30, 1880:

Miles operated.....	1,006.3
Miles owned.....	778.5
Miles subsidized with lands.....	638.5

Miles subsidized with bonds .....	394
Number of locomotives .....	106
Passenger cars .....	54
Baggage, mail, and express cars .....	23
Caboose cars .....	42
Freight and other cars .....	1,691
Stock subscribed .....	\$9,992,500 00
Par value of shares .....	50 00
Stock issued .....	9,689,950 00
Subsidy bonds .....	6,303,000 00
Funded debt .....	24,373,825 12
Floating debt .....	1,961,197 62
Interest on funded and floating debt .....	1,090,450 00
Interest on subsidized bonds .....	3,723,553 17
<b>Total debt .....</b>	<b>37,452,025 91</b>
<b>Stock and debt .....</b>	<b>\$47,141,975 91</b>
<b>Cost of road and equipment .....</b>	<b>34,359,540 66</b>
<b>Passenger earnings for seven months ending January 30, 1880 .....</b>	<b>\$690,669 71</b>
<b>Freight earnings .....</b>	<b>2,300,625 01</b>
<b>Miscellaneous earnings .....</b>	<b>155,139 25</b>
<b>Total .....</b>	<b>3,146 433 97</b>
<b>Operating expenses .....</b>	<b>1,841,571 38</b>
<b>Net earnings .....</b>	<b>1,304,862 59</b>
<b>Interest paid .....</b>	<b>\$27,175 89</b>
<b>* Acres of land unsold .....</b>	<b>4,566,046 68</b>

## SIOUX CITY AND PACIFIC RAILROAD.

The reports of this company show length of road operated, 217.14 miles; road owned, 107.42; subsidized line, 101.77; number of locomotives, 13; number of passenger cars, 9; number of baggage, mail, and express cars, 6; number of freight and other cars, 233. Stock subscribed, \$2,068,400; stock issued, \$2,068,400; funded debt, \$1,628,000; United States subsidy bonds, \$1,628,320; floating debt, \$278,592.05; accrued interest on funded debt, \$51,165; accrued interest on United States subsidy bonds, \$1,171,199.87; total debt, \$4,757,276.92; stock and debt, \$6,825,676.92; cost of road, \$5,355,551.28. Passenger earnings for year ending June 30, 1880, \$130,193.17; freight earnings, \$392,513.73; miscellaneous earnings, \$21,136.58; total earnings, \$543,843.48; operating expenses, \$421,232.03; net earnings, \$122,611.45; interest paid, \$98,119.90.

## TEXAS AND PACIFIC RAILWAY.

For the fiscal year ending June 30, 1880, the company reports: Miles of road owned and operated, 483.86; number of locomotives, 54; pas-

\* Also reported in the number of acres reported as unsold, belonging to the Union Pacific Railway Company.

passenger cars, 32; baggage, mail, and express, 11; freight and other cars, 1,060. Stock issued, \$8,653,500; par value, \$100. Funded debt, \$20,418,997.68; floating debt, \$398,621.43; unpaid interest, \$2,123.44; total debt, \$22,940,339.11; stock and debt, \$31,593,839.11. Cost of road, \$28,925,840.90. Passenger earnings, \$466,736.78; freight earnings, \$2,075,993.44; miscellaneous earnings, \$80,536.55; total earnings, \$2,623,266.77; operating expenses, \$1,542,899.44; net earnings, \$1,080,367.33; interest paid, \$662,520. Lands unsold (granted by State of Texas), 4,755,862 acres.

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#### SOUTHERN PACIFIC RAILROAD.

From reports made to the Auditor the following figures are obtained: Miles operated, 160.89; miles owned, 711.56; leased to Central Pacific, 550.67 miles; number of locomotives, 48; passenger cars, 77; baggage, mail, and express cars, 14; freight and other cars, 1,156. Capital subscribed, \$36,763,900; stock issued, \$36,763,900. Funded debt, \$28,872,000; floating debt, \$554,815.07; accrued interest on floating debt, \$219,450; total debt, \$29,426,815.07. Stock and debt, \$66,165.07. Cash, material, and accounts due, \$703,872.11. Cost of road, \$62,307,813.98; cost of equipment, \$1,848,533.51; total cost of road and equipment, \$64,156,347.49. Passenger earnings, \$399,349.34; freight earnings, \$455,382.51; miscellaneous earnings and rent of road, \$149.56; total earnings, \$2,534,881.41; operating expenses, including taxes and insurance, \$756,683.88; net earnings, \$1,778,197.53; interest paid, \$1,872,480.39. Lands unsold, 9,240,376 acres.

#### THE NORTHERN PACIFIC RAILROAD COMPANY.

The entire property of this company has been inspected by the Auditor, and is in good condition. A detailed statement of his observations will be found in his report.

The company is constructing at Saint Paul a handsome building to be used as general operating offices, and as soon as the requirements of traffic demand, proposes to build an iron bridge across the Mississippi River at Bismarck.

The Auditor calls particular attention to the character of the lands of this company, they being much above the average of those granted to other Pacific railroad companies.

Under the present management the general condition of the company has greatly improved, and vigorous measures have been adopted to complete the work to a successful completion.

The following statement is taken from reports furnished by the company:

Average number of miles operated, 781; miles owned 637.98. Capital authorized, \$100,000,000; common stock issued, \$49,000,000; preferred stock issued, \$43,412,645.12; total stock issued, \$92,412,645.12.

locomotives, 58; passenger-cars, 25; baggage, mail, and express, 12; freight and other cars, 1,671. Funded debt, \$3,881,834.41; floating debt, \$1,405,867.10; total debt, \$5,287,701.51; stock and debt, \$97,700,346.63. Cost of road, \$95,697,159.04; cost of equipment, \$1,243,531.05; cost of road and equipment, \$97,920,120.57. Passenger, freight, and miscellaneous earnings, \$2,230,577.37; operating expenses, \$1,400,422.62; net earnings, \$821,154.75. Acres of land unsold, 39,406,016.

#### THE ATLANTIC AND PACIFIC RAILROAD COMPANY AND SAINT LOUIS AND SAN FRANCISCO RAILWAY COMPANY.

The former company has been revitalized, and has begun the construction of its road west of Albuquerque, N. Mex.

Fifty miles of railroad are completed, and are reported ready for the examination of commissioners to be appointed by the President of the United States for that purpose. A portion of the original road is now owned and operated by the Saint Louis and San Francisco Railway Company. The property of that company is in fair condition. The net earnings for the fiscal year ending June 30, 1880, amounted to \$1,252,863.69, against \$575,734.77 for the corresponding period of 1879.

The company reports as follows:

Number of locomotives, 49; number of passenger cars, 10; baggage, mail, and express cars, 19; freight and other cars, 2,135. Stock issued, \$3,803,462; funded debt, \$16,771,286.96; floating debt, \$542,950.27; unpaid interest, \$220,513.50; total debt, \$17,534,750.73; stock and debt, \$11,338,212.73. Cost of road and franchises, \$36,143,950.32. Net earnings, \$1,252,863.69; interest paid, \$654,239.23. Acres of land unsold, 9,244,803.

#### OREGON AND CALIFORNIA RAILROAD.

From reports made by this company the following figures are given: Number of miles operated, 197.36; number of locomotives, 14; passenger cars, 9; baggage, mail, and express, 6; freight and other cars, 106. Par value of shares, \$100; stock issued, \$20,000,000; funded debt, \$10,950,000; floating debt, \$918,602.52; total debt, \$11,868,602.52; total stock and debt, \$31,868,602.52; cost of road, \$4,873,369.96; cost of equipment, \$590,434.80; cost of road and equipment, \$5,463,804.76. Passenger earnings, \$192,183.75; freight earnings, \$247,009.63; miscellaneous earnings, \$66,439.06; total earnings, \$505,632.44; operating expenses, including taxes, \$383,579.16; net earnings, \$122,053.28.

#### WESTERN OREGON RAILROAD.

This company furnishes the following report:

Miles operated, 49.76; number of locomotives, 7; passenger cars, 4; baggage, mail, and express cars, 2; freight and other cars, 171. Par value of shares, \$100. Stock issued, \$10,001,000; funded debt, \$4,695,000; floating debt, \$16,088.16; total debt, \$4,711,088.16; total stock and



debt, \$14,712,088.16. Cost of road, \$1,202,866.42. Passenger ings, \$34,895.20; freight earnings, \$72,822.86; miscellaneous earnings, \$5,410.48; total earnings, \$113,128.54; operating expenses, including taxes, \$114,584.80.

#### THE MISSOURI, KANSAS AND TEXAS RAILWAY.

The properties of this road have been inspected and found in condition.

The business of the company is in a flourishing condition and increasing rapidly. The net earnings of the company for the fiscal year ending June 30, 1880, amounted to \$2,158,324.40, being an increase of nearly 50 per cent. over the corresponding period for 1879, when they amounted to \$1,129,365.97.

#### THE ATCHISON, TOPEKA AND SANTA FE RAILROAD.

This road was examined in May, but owing to lack of facilities after the inspection was very unsatisfactory.

The business of the company is in a prosperous condition, the net earnings for the fiscal year ending June 30, 1880, amounting to \$1,588,806.05, against the sum of \$931,786.40 for the corresponding period of 1879.

#### APPENDIX, TABLES, &C.

The Auditor's report is accompanied by an appendix and tables containing statements and compilations of facts relating to the Pacific land-grant railroad companies, the laws affecting them, statements of their affairs, their receipts, expenditures, and operations, the accounts between the United States and the Pacific railroad companies, the condition of the respective land grants, and other matters of interest to the railroad companies.

The recommendations of the Auditor as to future legislative enactments in regard to subsidized and land-grant railroads are respectfully submitted to the consideration of Congress.

#### UNITED STATES GEOLOGICAL SURVEY.

The first annual report of the survey, which I have the honor to present, is of great interest that an abridgment of it is an injustice. The various geological exploring expeditions, which for years have worked without unity of aim and plan of its own and not unfrequently, were at last merged in a single organization on March 3, 1879. For the first time the management of the public domain has

scale and a systematic basis. The report sets forth that in order to avoid possible conflicts of jurisdiction, the purpose for which the geological survey was organized under the law creating it, namely, the classification of public lands, and, secondly, the examination of the geological structure and the mineral resources of the public domain, were to be construed as not to interfere with the business of the General Land Office, and not to extend the operations of the office over the whole area of the United States, but to confine them to the so-called public lands and States and Territories.

With regard to the classification of the public lands the report says: "The Public Lands Commission, created by Congress in the same law which organized the geological survey, carefully examined into the question of classification and disposition of the public lands. In the deliberate opinion of that body it has been adjudged impracticable for the Geological Survey or any other branch of the Interior Department to execute a classification in advance of sale without seriously impeding the rapid settlement of the unoccupied lands. I have therefore concluded that the intention of Congress was to begin a rigid scientific classification of the lands of the national domain, not for purposes of aiding the machinery of the General Land Office by furnishing a basis of sale, but for the general information of the people of the country, and to produce a series of maps which should show those features upon which intelligent agriculturalists, miners, engineers, and timbermen might hereafter base their operations, and which would obviously be of the highest value for all students of the political economy and resources of the United States. Studies of this sort entirely aside from the administration of the land office can be made of the highest practical value, and to this end a careful beginning has been made."

As to the operations of the Geological Survey proper, the practice formerly followed of starting out campaign parties for the West in the spring to return in the late autumn to Washington, has been abandoned. The director of the Geological Survey divided the region west of the one hundred and first meridian into four large geological districts, with fixed headquarters. The first of these divisions is that of the Rocky Mountain region embracing within its boundaries Colorado, New Mexico, Wyoming, and Montana, and a small part of Dakota, an area inclosing the whole of the great Rocky Mountain chain. He placed at the head of that division a geologist in charge, Mr. S. F. Emmons, with his main office at Denver, Col. The second division is that of the Colorado, embracing the remarkable plateau and cañon country which lies between the Rocky Mountains and the Great Basin. At the head of this division he placed a geologist in charge, Capt. C. E. Dutton, United States Ordnance Corps, with headquarters at Salt Lake City. The third division is that of the Great Basin, the tract of country bounded on the east by the Rocky Mountains and the Colorado plateau, and on the west by the country of the Sierra Nevada, Cascade, and Pacific Coast ranges, which lie between

and the Pacific Ocean—a country of the highest importance for abundant silver districts. To this district was assigned G. K. Gilbert, geologist in charge, whose headquarters were, for convenience, also placed at Salt Lake City. The fourth division is that of the Pacific, and embraces the whole of Washington Territory, that region which lies west of the Blue Mountains, and all of California except the desert region lying east of the Sierra Nevada and south of the 38th parallel. Mr. Arnold Hague, as geologist in charge, has his headquarters at San Francisco. The director states that “as soon as the work upon the cañons and plateaus of Colorado is done, it is intended to discontinue that division and to divide it on the line of the Colorado River between the divisions of the Rocky Mountains and the Great Basin.

The corps of the geological survey, as now organized, is divided into two classes: First, members of the regular and permanent corps, who are nominated by the director and appointed by the Secretary of the Interior, their appointments being made out and oaths of office being filled in the appointment office, Department of the Interior; second, temporary appointments, which the director is authorized to make and to revoke. Appointments to positions requiring scientific knowledge and practical experience are made only after a severe scrutiny of the qualifications of the applicant. Applicants for appointment under the division of general geology are required to furnish proper evidence of a good working knowledge of mathematics, physics, chemistry, geology, and mineralogy. Such evidence will consist of degrees of universities, or the testimony of experts in the respective branches, or the result of a written examination. Applicants for appointment under the division of mining geology must furnish equivalent evidence of a working knowledge of mathematics, mechanics, general geology, chemistry, metallurgy, and the mineralogy of economical products. The corps consists of the director, eight geologists, assistant geologists, one chief topographer, four topographers, ten assistant topographers, one chemist, one photographer, one chief draftsman, one clerk, one disbursing clerk, three clerks, two messengers, and watchmen. The appropriation for the fiscal year ending June 30, 1880, was \$100,000, and the amount expended from this appropriation for the fiscal year ending June 30, 1880, was \$79,375.57, and the amount remaining unexpended June 30, 1880, but required to meet outstanding obligations, \$20,624.43.

There are among the members of the geological survey men of distinguished and recognized eminence in their profession. With the approval of the Secretary of the Interior the geological survey was entrusted to the superintendent of the census with the collection of statistics of precious metals, iron, coal, petroleum, copper, lead, quicksilver, and other minerals for the census. In order to conform to the requirements of laws governing the census and the survey, the geological director and several



K. Gilbert, geologist in charge. "The Dinocerata, a monog  
extinct order of ungulates," by Prof. O. C. Marsh, palæontolo  
act of March 3, 1879, providing for the organization of the  
l Survey contains the following clause: "For the expenses o  
gical Survey and the classification of the public lands and  
g geological structure, mineral resources, and products o  
al domain, to be expended under the direction of the Secreta  
terior, one hundred thousand dollars." Careful not to exten  
gical Survey beyond these limits which Congress may hav  
l to impose upon its operations, the term "national domain"  
ve mentioned, construed to apply only to the public land S  
territories, although geological investigations in the States w  
ger contain public lands are equally interesting and importa  
ry as well as science. In view of the uncertainty of the mea  
term "national domain" the Appropriations Committee of the R  
representatives caused to be offered in the House of Representa  
tion No. 116 extending the field of the Geological Survey ove  
of the United States. That resolution was promptly pass  
ouse, but is still pending in the Senate. Not feeling warra  
icipating the action of the Senate by practical operations ou  
public land States and Territories, but desirous of preparin  
work if Congress should grant authority for it, the Director o  
gical Survey has laid down in his report his plan of dividing  
f the United States east of the 102d meridian into division  
the work might severally be carried on to advantage. On  
would embrace Maryland, Delaware, Pennsylvania, New Je  
York, and the New England States; the other West Virginia  
North and South Carolina, Georgia, Florida, Alabama, Tennes  
Kentucky—the two together the great Appalachian syste  
ains extending from New Brunswick to Alabama. The great  
Mississippi is also divided into two grand divisions: first th  
of the North Mississippi, bounded west of the Mississippi an  
by a line including Missouri and Kansas to the intersection o  
parallel with the 102d meridian. East of the Mississippi Rive  
forms the dividing line between the northern and southern dist  
g leave to call the especial attention of Congress to the ren  
by the Director on the important benefits which the extension o  
gical Survey over the whole area of the United States would  
on the industrial interests of the American people. He sets  
n the realm of mineral productions the only efforts made to ac  
sitive knowledge have been the highly useful but feebly end  
of the late mining commissioners, whose investigations wen  
to end for lack of appropriations; that to-day no one knows,  
lightest approach to accuracy, the status of the mining indu  
technically, as regards the progress and development maki  
ds, or statistically, as regards the sources, amounts, and valu



that considering the extent of country over their wonderful variety, and yet unmeasured, it is apparent that no private individual could do what long since ought to have been done by a public and practically practical investigation and exposition of at even the results of associated efforts, as the Iron and Steel Association," however valuable and imperfect, and that "the Federal Government successfully prosecute the noble work of investigating the natural mineral wealth of the country and metallurgy, and the industrial statistics on the subject of iron as an example, he shows by his own "hopeless it is to look to any other source for his service." With regard to the question of any constitutional power to extend such inquiries into the States, it is urged that "from every analogy it has clearly assumed to possess the requisite power to investigate agricultural industry and manufactures, that branch of inquiry, it can investigate and make a coast and geodetic survey over the whole of the United States, and make a geological survey." The cost of carrying out such a survey covering the whole of the United States is not more than the same sum which is annually expended on the coast and geodetic survey. The importance of the results of the survey of such information as the geological survey can be overestimated. Being now so fortunate as to have at the government a corps of scientific men capable of undertaking this important work, under a dignified and give system of action and harmony of purpose, there is but little doubt that the American Government have an expenditure small in proportion to the results effected. I therefore earnestly commend the work of the Geological Survey to the consideration

### PENSIONS.

Under the present administration the organization of the Pension Department has undergone some important changes. Better methods involving more care in the examination of applications, and a system of files and records, have been adopted. The consolidation of pension agencies, under the Executive order of May 7 of that year, by which the agencies in existence were reduced to 18, and new ones were created. The advisability of the change was questioned at the time, but actual experience has shown that the change in payments, an improved system of accounting in disbursements, a more effective super-

vision by the Pension Office, greater convenience in handling receipts and accounts, and the annual saving of \$142,000 on salary account are among the substantial results of the consolidation.

The total number of claims settled during the four years preceding June 30, 1880, was 74,179, an increase of 26,536 over the previous years. On the 30th of June, 1876, the number of pensioners borne on the rolls was 232,137, and the payments for the year which then closed amounted to \$28,351,599.69. On the 30th of June, 1880, the number was 250,802 and the payments \$57,240,540.14. The large increase, as seen between the two periods, is due to the fact that the payments of the last year include the arrears of pension allowed under act of March 3, 1879.

The Commissioner estimates that upwards of \$50,000,000 will be required to pay the pensions of the current year, and that a like amount will be needed for the year following.

The magnitude of the interests involved in this branch of the service can be understood by the presentation of these figures, and it needs no argument to prove that the adoption of the very best attainable system of adjudication is a necessity.

While the sacred obligations represented by these enormous sums of money should be promptly paid, and every honest pensioner receive his or her dues with as little delay as possible, the greatest precaution should be exercised on the part of the government to prevent the commission or payment of fraudulent claims. The present system of adjudication, based almost wholly upon *ex parte* testimony, is admittedly defective. Perjured witnesses appear as well on paper as honest ones, and where no official record corroborates the evidence given, deception is not only easy, but the temptation to practice it very strong. A change of method in this direction is, in my opinion, absolutely essential to prevent fraud. It is not necessary to wait until a perfect system is presented before authorizing a departure from the present one. The plan proposed by the Commissioner of Pensions and recommended by him in his annual reports since 1876 looks to the correction of existing evils. It is not claimed as perfect; it may have faults which only a practical test can determine, but the importance of the work it proposes to do and the large interests which depend upon the result should commend it to the earnest consideration of Congress for it a fair trial. I am convinced that it is an improvement on the present system, and that any faults which actually exist in it could be easily corrected, either by additional legislation or the exercise of administrative discretion.

The report of the Commissioner contains an appendix of statistics and figures. On the 30th of June last the rolls showed 133,212 Army invalids; 78,772 Army widows; 1,060 Navy invalids; 1,870 Navy widows, mi-



arrangement of the files to correspond, has been of great advantage to the service.

The report refers to the subject of Indian pensions, on account of the three regiments of Indian home guards, raised in the Indian Territory. In 1879 the Commissioner detailed two special agents to the Territory and investigate the claims upon their merits. The investigation was successful and the claimants are about to be paid in full; a large sum of accrued pension is due in each case, which, under the law, must be paid by check issued by the pension agent. The Commissioner says that there are no banks or other financial institutions in the Territory upon which the pensioners can depend to exchange their pension checks at a reasonable rate current money for their pension checks, and the pensioners are in danger of being overreached and defrauded of their pension by unscrupulous speculators and adventurers, who infest the Indian Territory and settlements, unless some precaution shall be taken for their protection, and he recommends legislation to authorize the accrued pension to be paid in installments not to exceed \$200 each, as a measure of protection.

There are about 2,450 pensioners residing at the various branches of the Indian home for disabled volunteer soldiers, whose pensions annually amount to about \$300,000, which have been paid to the treasurer of the Indian Territory and disbursed under the direction of the managers, who claim that this course is justified by the law and necessary in order to secure peace, discipline and good order among the inmates. The Commissioner expresses his opinion that the law does not provide for the payment of these pensions in this manner, and requests that the subject be brought to the attention of Congress, so that the duties of the Commissioner of Pension and managers of the home in relation to these pensions be more clearly defined.

Legislation to authorize the payment of the pensions to the wives and children of insane or imprisoned invalid pensioners is recommended.

The report also recommends legislation to authorize the pension of minor children to be commenced at the date of the last payment to the widow of the soldier in cases where she has remarried and concealed the fact, and continued to draw the pension.

It also recommends legislation to enable the Commissioner to dispose more equitably of claims for increase of pension than can now be done under the law, and providing for the review of unjust rates of pension which have been established under a mistake.

The report next deals with the subject of attorneys' fees. It calls attention to the fact that since the act of June 20, 1878, there is considerable doubt whether the penal provisions of section 4785, Revised Statutes, are enforced against attorneys, and recommends an amendment to define the doubtful construction.

It also recommends legislation to protect the department and

, who continue to solicit and receive longer recognized.

he office in the investigation of frauds, the expenses of the year were \$26,466.19; the government by the investigation

inion that the great number of frauds is considered that their discovery, by chargeable to accident, or to voluntary evidence that but a small percentage of discovered.

on that the compensation of pension ends a revision of the law fixing their extending to them the right to use the official correspondence. He also recom- twenty cents be paid them for their

mendation for an increase in the num- 1, 2, 3, and 4, and also for an increase sion, appeal clerk, chief clerk, deputy

#### TENTS.

r of Patents shows an increase in the ending June 30, 1880, over that of the

r patents was 20,990, being 1,690 more nber of applications for design patents ts 598; number of caveats filed 2,680; tration of trade marks 732; number of bels 479; number of disclaimers filed rits 781.

cluding reissues and designs, 13,649, us year. The number of trade-marks red 307; patents withheld for non-pay- of patents expired 3,364.

vere \$730,547.12, being \$27,400.33 more

were \$538,926.43; the expenditures for re \$548,651.37, \$5,000 of this being for fire and not chargeable to the current

he office were \$9,725.04 less than the in in excess of receipts over expendi- excess of receipts over expenditures is



The Commissioner makes several recommendations worthy of special attention. He calls special attention to the inadequacy of the accommodations provided for the use of the office. He also calls attention to the need of a system of digests of inventions. To carry out this suggestion would require special appropriation or an increase in the working force of the office, in order that a portion thereof might be detailed to that purpose.

The interests of the service, in his judgment, demand an additional force of clerks and examiners, and in submitting his estimates for the fiscal year ending July 1, 1882, he recommends an increase of one principal examiner, three first assistant examiners, three second assistants and three third assistants beyond what was provided for in the appropriation bill for the present fiscal year. For the purpose of a better organization of the office he, in the same connection, recommends that there be created three chiefs of divisions at a salary of \$2,000 each, which shall take the place of an equal number of fourth-class clerks. He also recommended a small increase in the number of clerks, and that the salaries thereof be readjusted to correspond with the character of the work performed. To do this an increase of about \$50,000 in the appropriation for salaries is required.

## EDUCATION.

The Commissioner reports satisfactory results in the work of his Bureau. During the year 87,304 documents, circulars, and letters were sent to correspondents at home and abroad. During the same period 19,654 were received by the office.

The office library contains about 12,000 volumes and 25,000 pamphlets.

Attention is called to the marked improvement in the method of teaching, especially in rural schools, and the gratifying growth of public sentiment throughout the country in favor of our public school system.

The laudable efforts in the direction of industrial education are noticed, and the excellent work being done by colleges of agriculture and the mechanic arts is commented upon.

The Commissioner renews his recommendation for the passage by Congress of some act of financial aid which should be distributed first on the basis of the percentage of illiterate persons to the total population, and, substantially, on the plan adopted by the trustees of the Peabody Fund.

He refers to the interesting information received respecting the plan made to establish schools in Alaska. The Russo-Greek bishop has given word of his desire to co-operate, if any plan for public schools be adopted by the government. The schools at Sitka and Wrangel, especially the girls' boarding-school at the latter place, report good progress. The children are managed easily and learn readily.

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The Commissioner states th  
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NSUS.

department, the Tenth Census

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he census of South Carolina, with a report of the special agent sent to investigate the extraordinary gains of population in that State, was found among the documents accompanying this report.

The Superintendent of Census anticipates being able to make a complete report of the operations of the census, so far as the enumeration of inhabitants is concerned, during the coming month of December. Out of nearly 31,500 enumeration districts formed for the purpose of this census, complete returns have been received from all but 7 districts, in which unavoidable accidents, such as the loss of material, the mails, deaths of enumerators, or the delinquency of individuals, have thus far prevented the completion of the work, which, however, it is expected will be brought to a conclusion within the coming week or the next few days.

I am gratified to report that the expenditures of the census have been kept within the limits prescribed by the act of March 3, 1879. It is believed that a sufficient amount remains out of the sums appropriated for this service to complete the compilation and tabulation of the numerous classes of statistics collected.

The exigencies of the service since the first of May have required considerable clerical force to be maintained upon work at night.

It is the view of the Superintendent that the compilation and publication of the several classes of statistics should be pushed forward with the utmost expedition.

While the census will always remain of value for purposes of comparison with preceding periods, its first and greatest service is its immediate use not only for determining the distribution of political power according to the provisions of the Constitution, but also for directing State and national legislation, and for guiding individual and public effort for the promotion of public interests, and for the amelioration of the condition of the criminal, afflicted, and dependent classes.

Every year and every month, therefore, which can be saved by the compilation and publication of the census statistics adds especial value to their value.

The authority conferred by the eighteenth section for the appointment of special agents to collect the manufacturing statistics of large and considerable towns has been made use of by this office to the effect of appointing such agents in 276 cities and towns, the total number of such agents appointed being 365. From 260 of these cities and towns all returns have been already received, and an examination of the schedules shows that the value of the manufacturing statistics of the present census has been vastly enhanced by the system thus adopted.

In the remaining sixteen, embracing the largest cities of the country from which returns, on account of the great number of establishments to be canvassed, are not yet fully due, the work is, according to frequent advices received, progressing in the most satisfactory manner. All the returns within this department of the census will, it is believed,

# RETARY OF THE INTERIOR.

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be pushed rapidly forward.

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.....	\$288,708 84	
.....	5,769 55	
.....	25,942 09	
.....	24,464 12	
.....	63,310 33	
.....	8,750 42	
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.....		2,592,0

In but three cases has it been found necessary to use the authority conferred by the twenty-third section of the act of March 3, 1879, for the removal of supervisors and the appointment of their successors, in neither of these cases were the causes requiring removal such as to reflect upon the personal or official integrity of the supervisor so removed.

Attention is respectfully invited to the remarks of the Superintendent of the Census on the necessity of promptness in the publication of census reports, and also to his recommendation as to their publication by special contract. It appears highly desirable that this subject should have early consideration in Congress.

### ENTOMOLOGICAL COMMISSION.

The United States Entomological Commission had a prolonged session immediately after the adjournment of Congress, and perfected plans for carrying to completion the work with which it is charged. As during the previous year, the labor was divided so that Professor Riley had charge of that part of the work in which the cotton planter is concerned, while Doctor Packard and Professor Thomas had charge of the work in the West, relating to the Rocky Mountain locust. Professor Thomas made an exploration of those parts of Dakota and British America which embrace some of the most important regions in the permanent breeding-grounds of the locust. Dr. Packard visited Wyoming and Utah collecting information regarding the locust; and his assistant traversed over two months in different parts of Montana, ascending the Yellowstone River, crossing the country to Bozeman and Helena, and returning through Eastern Idaho. Other agents of the commission collected locust data in Utah. All this region, usually affording the most favorable breeding-grounds for the locust, was remarkably free from locusts this season, so that the commission believe that there is little likelihood of injury from locusts in the West in 1881.

The second report of the commission is now just ready for distribution, and treats very fully of the locust problem, especially as to future prospects in the great Northwest, the best means of averting locust injury there, and preventing migrations therefrom into the fertile States to the east and south; also how the government can aid in obtaining beneficial results.

Professor Riley, with a corps of able assistants, has conducted an investigation of the cotton-worm, and the results of his work will doubtless tend to lessen the destruction of the cotton-plant.

In addition to the second report, the commission has issued three special bulletins during the year, one by Professor Riley, on the cotton-worm; one by Professor Thomas, on the chinch-bug; and one by Dr. Packard, on the Hessian-fly. They are illustrated summaries of all that is known of these injurious insects, and have been in such demand that Congress ordered extra editions of the two first mentioned, and all are exhausted, so that further demands cannot be supplied. The



Report of the commission is being prepared, and also a special and final memoir on the insects of the cotton-plant, the publication of which I commend to Congress.

### HOT SPRINGS RESERVATION.

The Hot Springs Reservation is located in Garland County, Arkansas. On October, 1875, the United States Supreme Court decided that the title to that portion of the lands which had been in dispute for more than fifty years vested in the United States. A receiver was appointed by the court, and the rentals collected by him and covered into the treasury amounted to \$33,744.78.

Under the act of March 3, 1877, the office of receiver was abolished, and a commission was appointed to lay out the lands of the reservation into convenient squares, blocks, lots, avenues, streets, and alleys; designate the tract, including the Hot Springs Mountain, which was to be reserved from sale; show by metes and bounds, on a properly prepared map, the parcels or tracts of land claimed by reason of improvement or occupation; hear any and all proof offered by claimants and occupants and the United States in respect to said lands and improvements; and to finally determine the right of each claimant or occupant to purchase the same, or any portion thereof, at the appraised value fixed by said commissioners.

The commissioners were also authorized to condemn and remove all buildings or obstructions upon the reservation when necessary, fix the value of the property condemned, issue certificates therefor, and at the conclusion of their labors to make a full report of their proceedings to the Secretary of the Interior.

On the 30th of March, 1877, the President appointed as members of the commission, A. H. Cragin, of New Hampshire; John Coburn, of Indiana; and M. L. Stearns, of Florida. They were reappointed December 6, 1878, for one year, and submitted their final report December 11, 1879.

The following papers, documents, records, maps, and plats accompanied the report, and are now on file in this department:

1st. All of the petitions filed with the commission for the right to purchase land, and for condemned buildings, with the testimony offered by the claimants in the several claims, and the findings of the com-

mission in each claim, which includes the proceedings of the commission, which includes the proceedings made by the commission in the several claims, the petitions or claims filed, furnishing a reference to the commission in each claim.

2d. A map provided by law, showing the name of each claimant, the parcel of land, the appraised value thereof, and with such claim upon the map.

3d. Books, containing the valuation of each lot or

tract of land in the reservation remaining to be sold, and of the improvements thereon.

6th. A map of the entire reservation of four sections, as provided by law, accompanied by maps of the several quarter sections in the reservation showing, the alignment of the streets by distances, angles, curves, the dimensions and areas of lots, the position of monuments and other details.

7th. Maps in sections, showing the several claims, as nearly as possible, as originally made by the claimants.

The number of certificates issued by the commission for the pre-emption right to purchase was 647, covering an aggregate area of 63,117 acres.

The number of certificates issued for condemned buildings was 1,000, with a total valuation of \$74,696.

In accordance with the provisions of the act of March 3, 1877, officers of the Little Rock land office were instructed to allow the lands to be entered by those in whose favor they were adjudicated.

The thirty days allowed the Secretary of the Interior to instruct land officers were extended by Congress sixty days from January 1, 1880.

March 16, 1880, the local officers at Little Rock were notified to carry into effect the instructions previously given.

By an act of Congress, approved June 16, 1880, the valuation of the awarded lands as fixed by the commission was reduced to forty per cent of the original appraisement.

The certificates issued for condemned buildings, with one exception, were made receivable for entries and purchase money for lands in the Hot Springs Reservation.

Those divisions of the reservation known as North Mountain, West Mountain, and Sugar Loaf Mountain, were reserved from sale and dedicated to public use as parks attached to the permanent reservation.

The title to the cemetery lot within the limits of the town was transferred to the corporation of Hot Springs on condition that the bodies now buried within the inclosure should be decently interred in a suitable burying-ground elsewhere, and that the said lot should be used never as a town or city park.

The Secretary of the Interior was authorized to designate six lots for schools, and one lot for the Baptist Church of Hot Springs, the office of the latter having been destroyed by fire.

The streets, courts, and alleys were ceded to the town of Hot Springs.

The lots not awarded to claimants, or otherwise disposed of by the commission, were to be sold at public auction, at the discretion and under the direction of the Secretary of the Interior, after the usual notice, at a price not less than the appraised valuation, and all moneys received were to be held as a special fund for the improvement and care of the pe-

ment reservation, and for the maintenance of free baths for the invalid poor of the United States.

By the provisions of this act the appraised valuation of awarded lands was reduced from \$224,819 to \$89,927.60, a reduction of \$134,891.40.

The appraised valuation of the unawarded lands was \$105,499. As the mountains reserved from sale by the act of June 16, 1880, were appraised at \$62,200, the available aggregate of unawarded lands amounts to \$43,299. The total valuation of awarded and unawarded lands, exclusive of the mountain reservations, is \$133,226.60. As certificates for condemned buildings, amounting to \$52,696, are receivable as money for payment of these lots, the cash returns, if all lots are sold at their present appraised valuation, will be \$80,530.60.

The appropriation for salaries and other expenses of the Hot Springs Commission amounted to \$82,000.

The dates and amounts of the separate appropriations were as follows: May 26, 1877, \$27,500; December 22, 1877, \$15,000; March 10, 1879, \$12,000 (deficiency); March 10, 1879, \$27,500.

The amount of money received from the rental of waters during the year ending June 30, 1880, was \$2,774.03; expenditures during same period, \$2,550.

The flow of hot water having been found insufficient to supply the daily demands made upon it during the few hours devoted to bathing, a reservoir has recently been constructed to store sufficient water to accommodate all the bath-houses now in operation or likely to be established for some years to come. It is a substantial structure, built of brick, and cost \$3,034.86.

### THE YELLOWSTONE NATIONAL PARK.

The building of the Utah and Northern Railroad has made the Yellowstone National Park more accessible; and it may be assumed that the number of visitors would now rapidly increase if the park itself were provided with facilities of travel. The original intention of Congress in reserving that interesting region from sale or other disposal was undoubtedly that it should become a popular place of resort by the people of the United States. This was a wise measure; but a personal inspection convinced me that very much remains to be done to give that measure the desired effect. The Yellowstone Park covers an area of over 3,000 square miles. Its western part contains the largest known geysers in the world, far grander than those of Iceland, California, New Zealand, and Formosa; and hot springs of signal beauty and remarkable mineral properties. It is in this respect certainly the most interesting region on this continent, and, perhaps, on the face of the earth; and the medicinal qualities of its waters, so far only in part analyzed and ascertained, may render it one of the most important restorative resorts for the afflicted. At the same time, it presents mountain scenery of peculiar beauty, north, west, and south of Yellowstone Lake; while the

grotesque rock formations, and the intense coloring of the grand ca-  
 thedral of the Yellowstone River, present a spectacle in the highest degree g-  
 rand and unique. So far, the larger part of the park has remained an al-  
 most unbroken wilderness. A wagon-road has been constructed from  
 Mammoth Hot Springs, near the northern border, to the geyser basins,  
 a distance of about 55 miles, which, however, is very rough and im-  
 perfect in grading. The Shoshone and Yellowstone Lakes, the magnifi-  
 cent falls of the Yellowstone river, and some of the most interesting moun-  
 tain passes and valleys are accessible only by trails and bridle-paths, in-  
 volving a difficult passage. There is not a single hotel in the park to accom-  
 modate travelers; and while a stage line has been established to con-  
 vey visitors to the geyser basins, they are left there without any fur-  
 ther means of conveyance. To accomplish the object for which the reser-  
 vation was intended it is indispensably necessary that the road con-  
 necting the Mammoth Hot Springs with the geyser basins should be grad-  
 ually improved; that wagon-roads should be constructed from there to  
 Shoshone and Yellowstone Lakes; that a bridge should be built across  
 the Yellowstone River above its falls; and that a further system of wa-  
 gon-roads be laid out in the direction of the mountain ranges south,  
 east and north of Yellowstone Lake. It is also necessary, in my opinion,  
 that the department be authorized to lease little tracts of land at dif-  
 ferent points of interest to private persons willing to erect hotels, under  
 regulations as may be devised for the protection and convenience of the  
 public. The law as it stands authorizes this department to concede  
 such leases for ten years; but it will be difficult to find responsible  
 persons willing to erect suitable buildings on so short a tenure. The  
 proposition of this kind has reached the department. I would  
 therefore, recommend that the department be authorized to make  
 leases for a term of at least thirty years, upon such conditions as, in  
 the discretion of the Secretary of the Interior, the interests of the travel-  
 ing public may require. I have no doubt that if the territory of the park  
 were disposed of by sale or otherwise to private persons, private enter-  
 prise would soon furnish all the conveniences necessary without ex-  
 pense or outlay on the part of the government; but it is also probable that  
 under such circumstances the traveling public would be subjected to  
 great and extortions of so annoying and burdensome a nature that the  
 original intention of Congress would be virtually defeated and the  
 park become a place of resort only to persons of large means. It is  
 therefore, important, if the intention with which the reservation was  
 originally made is not to be defeated, that the government retain  
 control of the park; but if it does, it is also the plain duty of the gov-  
 ernment to take such measures as are necessary to make it practi-  
 cally accessible to the people. To this end an appropriation for next year  
 of at least \$50,000 for the construction of a suitable system of roads and  
 bridges would seem advisable.

; recommendations:

competent persons be appointed by the  
 g out and building of roads and bridges  
 rovements, and to make the necessary  
 s therefor; the members of such board  
 their actual expenses allowed while  
 duties; that this board be authorized  
 astodian of the park, at a salary of —  
 lice force of at least ten members, to  
 ction and aid, to protect the craters or  
 springs from destruction and deface  
 ns mentioned below.

the Interior be authorized to invite the  
 a proper person to observe the extra  
 he park, to analyze its waters, and to  
 compensation therefor to be fixed by

struction of game is going on in the  
 hat some of the valleys of the Nationa  
 , places for the wholesale slaughter o  
 lesirable to preserve in some locality  
 d animals of that region, and that the  
 very suitable place for that purpose  
 e law authorizing the Secretary of the  
 government of the park, to prohibit the  
 altogether; while fishing, except with  
 . Regulations have also been made  
 n the pasture lands of the park. As  
 egulations will require the enactment  
 their violation, a draught of a bill to  
 consideration of Congress.

## OMPANIES.

s and meters shows that the gas com  
 a have generally during the year fur  
 ting power equal to the requirements

forth the results of experiments made  
 ear to determine the quantity of ligh  
 ning the same amount of gas, which

aw should be so modified as to require  
 within a specified time, to replace al  
 ot been inspected with meters which  
 sealed, and, also, to require that when  
 ls of meters which have been inspecte



re removed by the company to which they belong, such meters again be inspected before being placed in service.

It is suggested that the law does not specify the person whose duty shall be to institute proceedings to recover the penalty for failure to supply gas of the required purity and illuminating power. The law should be amended in this respect, and also should set forth more particularly the manner in which the penalty should be recovered.

Receipts and expenditures of the office :

Cash on hand July 1, 1879 .....	\$1,000.00
Received during the year .....	1,000.00
Expended on the laboratory and apparatus.....	1,000.00
Cash on hand July 1, 1880.....	1,000.00

#### PUBLIC BUILDINGS AND GROUNDS.

The report of the Architect of the Capitol sets forth the improvements which have been made during the year in the Capitol, the grounds, the Government Printing Office, and the City Hall.

He calls attention to the fact that it was not possible to execute the act passed at the last session of Congress providing for the construction of an elevator for the south wing of the Capitol, for the reason that the proviso to this act required that it should be so located as not to interfere in anywise with the lighting and ventilation of the building, and was found that it could not be so located as to comply with the provisions. He expresses the hope that Congress will so amend the act to remove the restriction referred to, so that the appropriation made for the elevator can be used during the present fiscal year, thereby obviating the necessity for its construction.

The Architect recommends that the police of the Capitol grounds be detached as special police to the Metropolitan department.

He renews his recommendations that the old hall of the House of Representatives and rooms adjoining be made fire-proof.

The Electrician to the House of Representatives reports the results of the method of lighting the gas by the dynamo-electrical machines, and an annual saving of \$1,000 or \$1,200 over the old method of lighting by batteries. The experiments made with the electric light do not warrant him in recommending it for the legislative halls. He recommends its use in the Capitol grounds and adjoining parks.

The amount expended on the Capitol Extension for the year ending June 30, 1880, was \$50,000, the amount appropriated for this purpose.

The expenditures on account of improvement of the ventilation of the Hall of the House of Representatives were \$30,000, the amount appropriated.

The expenditures on account of the heating apparatus for the Chamber were \$4,000, the amount appropriated.

The expenditures for lighting the United States Capitol and grounds

## REPORT OF THE SECRETARY OF THE INTERIOR.

ere \$30,516.01. The appropriation was \$32,400. Balance to be returned to the Treasury, \$1,883.99.

The expenditures on account of the Capitol grounds were \$60,000, amount of the appropriation.

The expenditures during the year on account of the extension of Government Printing Office, which is now finished, were \$29,031. The amount expended during the previous year was \$14,244.57. The appropriation (\$43,800), \$516.19 remain to be returned to the Treasury.

### NEW PUBLIC BUILDINGS.

as in the course of time grown to be. The Patent-Office building is altogether less than one-half of its records and its clerks are hindered on account of the insufficiency of complaint. Only four of the departments are accommodated in the building: the Land Office, the Indian Bureau, and the Survey. And even these four are so crammed that the corridors must be used for the storing of papers which are in daily use, and that the crowding is such as not only to cause very serious inconvenience with the transaction of the public business of the Interior Department, namely, the Pension Bureau, Bureau of Education, and the Office of the Commissioner, but also in different parts of the city, in buildings of the Interior Department, inclusive of \$14,900 in rents. The scattering of this department in widely separated localities is a great circumstance in the correspondence between the different parts of the department, which should always be kept together, and correspondence and valuable papers require constant signature and inspection, and are in danger of being lost or damaged. The crowding together of a large number of persons is dangerous to health, and sometimes interferes with the performance of duty. The file rooms are sometimes difficult to get at documents necessary for business. Almost every foot of space, except under stairs and arches, and in connection with the roof of the building has been used for papers and records. We have been obliged to use the halls recently restored for the accommodation of the department, putting in wooden partitions and covering the walls with the exhibition of models with desks and other furniture. The erection of a new edifice for the Department will soon be recognized as

absolute necessity. The Patent Office alone will in the course with its accumulating records and models, occupy the whole present Interior Department building.

I am informed that similar complaints come from other departments of the government; that the Post-Office Department finds its quarters insufficient; that a large portion of the force of the Department is located outside of the main building; that the Department of Justice is in a rented house; and that the new edifices for the Departments of State, War, and of the Navy will not be enough to accommodate all the offices belonging to those branches of the public service. Under such circumstances it appears that the agencies of the government call for the erection of not only several public buildings, for the Interior Department, for the Post-Office Department, for the accommodation of the Department of Justice, and for different offices connected with the War and Navy Departments, which do not find accommodation in the buildings now existing, but also the progress of construction.

In view of this fact I beg leave to repeat some remarks I made in honor to address to the Hon. George L. Converse, chairman of the Committee on Public Lands, House of Representatives, on the 18th of August, in reply to a letter of inquiry from him:

If such public buildings are constructed upon a harmonious plan, they will contribute much to the public convenience, as well as to the beauty of the national capital. I would respectfully recommend, therefore, that the following suggestions be considered:

It being desirable that the executive departments should be located in as great proximity as possible to each other, as well as to the Executive Mansion, it would seem that no better place for the construction of new buildings for them could be found than the blocks surrounding Lafayette Square on the east, north, and west of the Treasury, the Executive Mansion, and the State, War, and Navy Departments, leaving the square itself undisturbed. A group of four public buildings surrounding that square, erected upon an harmonious plan as to architecture, would compare favorably with the buildings now existing, probably become one of the most imposing and beautiful groups of public edifices in the world. The purchase of the lots surrounding Lafayette Square would indeed be somewhat costly, but the public convenience, as well as the architectural beauty of the group mentioned, would no doubt compensate for the expenditure but little larger than would be occasioned by the purchase of parcels in other parts of the city. These buildings could be erected one after another as the necessities of the case may require, but a harmonious plan for the whole group should be made by competent architects and accepted by the government before commencing the erection of any one of them. I respectfully submit this suggestion to your consideration and that of Congress, believing as I do that the erection of the public buildings that are now and will become necessary, upon such a plan as here suggested, will be more satisfactory to the people of the United States than would be the erection of a number of public offices in places more or less accidentally chosen, thus losing much of their architectural effect, while being but little less costly. It should be added that if such a project be entertained it can be initiated and partly executed at such less expense now than will be possible ten or fifteen years hence, and the non-adoption at a time like this might possibly become a matter of very great regret.

## SECRETARY OF THE INTERIOR.

### INTERIOR DEPARTMENT BUILDING.

portion of the building which was destroyed by a few minor details, completed.

by Congress for this work was \$250,000. Finally authorized by Congress, Jurisdiction of the expenditures which reduced the available estimate submitted of the cost of the building authorized by act of March 3, 1879. I wish to state that the expenditures have been, above stated. The architect in charge is required to complete the ornamentation, including rubber plates for steps, and remains to be done.

Improvement over the old ones, being beneficial in general arrangement. The architect has to the space hitherto available, which credit is due to the architects and engineers for the original design, but for the fidelity with

which it was executed by Congress, consisting of the architect of the Capitol, and the Engineer, entitled to no less credit for keeping the building in repair, and for the general management.

The building is at present in a very insecure condition, with developed defects in the arches, which must be unless promptly remedied. In my opinion, the insecure roof which now covers the building is a tinder-box, and covering imperfectly, at any time endanger the safety of the building. It is necessary to construct a fire-proof roof of a faulty plan, would be so radical a change in the interest of public economy to recommend a change on the plan adopted in the rebuilding.

I am asked for to carry out this plan, and I hope that Congress may deem it advisable.

The halls and rooms immediately under the roof are seriously damaged by heat and

and necessary repairs is \$10,000, and an appropriation is recommended.

A resolution was made at the last session of Congress to protect the del-halls with fire-proof cases. Congress

have been entered into for the construction of as many as contained for the amount named. As the original estimate for this was \$160,000, an additional sum of \$80,000 will be needed to supply halls with the number of cases required.

#### HOSPITAL FOR THE INSANE.

The number of patients in the hospital June 30, 1879, was 819, 617 were males and 202 females.

The number admitted during the year was 225, of whom males and 44 females. The number discharged as having recovered 52, improved 33, unimproved 3; 46 males and 13 females died.

The number remaining in the hospital June 30, 1880, was 897, 691 were males and 206 females. Of those under treatment during the year, 529 were from the Army, 53 from the Navy, 462 from civil life.

The report of the Board of Visitors gives a synopsis of the operations of the hospital during the whole period of its existence.

The records show that of the 4,940 cases treated in the hospital during the twenty-five years of its existence, 2,095 recovered.

The estimates for the next fiscal year are as follows:

For the support, clothing, and treatment of the insane .....	\$143,000
For general repairs and improvements .....	\$175,000
For special improvements .....	\$5,000

One purpose for which the last-mentioned appropriation is asked is to furnish the hospital with a supply of pure water. The hospital has hitherto been supplied with water from the Anacostia River, in front of the hospital grounds. It evidently contains impurities rendering it unfit for use, and these impurities will increase year after year. It is estimated that \$25,000 will be required to connect the hospital with the water supply of the city of Washington.

In my opinion this improvement should be made without delay.

The hospital farm has not sufficient accommodations for the stock and the proper protection of the harvested crops.

An appropriation of \$5,000 is asked for additional farm buildings. I recommend that this appropriation be made.

The Board of Visitors also recommend the erection of a suitable infirmary building, a greenhouse, and a kitchen detached from the main building. I concur in these recommendations, and also in the recommendation that provision be made for the erection of a distinct building for the female insane, to cost \$250,000, to be completed in five years, and that the sum of \$75,000 be appropriated for this purpose during the year ending June 30, 1882.

The sum of \$143,000 was appropriated for the support of the hospital during the present fiscal year. It is estimated that \$175,000 will be required for this purpose, and that an additional sum of \$5,000 will be required for ordinary repairs and improvement to keep the hospital in good order.



deterioration. The board asks for a deficiency appropriation of \$100,000.

A detailed statement of the receipts and expenditures of the hospital for the last fiscal year, required by the act of June 4, 1880, is attached to the report of the board.

#### COLUMBIA INSTITUTION FOR THE DEAF AND DUMB.

The number of pupils under instruction during the year was 128. Of these 79 were in the collegiate department, representing twenty-four States and the District of Columbia, and 49 were in the primary department.

The general health of the pupils has been good, and but one death has occurred.

Instruction in articulation has been continued with increasing success. A diploma and silver medal were received from the Paris Universal Exposition of 1878, in recognition of the remarkable advance made by the collegiate department.

The president of the institution visited Europe during the summer, attending an international convention of instructors held in Milan, Italy, early in September.

The expenditure for the year amounted to \$53,522.06, and the excess, of which \$29,444.48 were for salaries and wages, to be expended next year are for current expenses and repairs, in excess of that appropriated for the present year. The balance for completion of the gymnasium, the erection of a new building, and for the improvement and inclosure of the grounds.

The institution made provision for the care and education of blind children belonging to the District of Columbia, the expenses of the same to be defrayed out of the appropriation for the support of the Institution for the Deaf and Dumb. One applicant has been placed in the Pennsylvania Training School for Feeble-minded Children, at Media, near Philadelphia.

Twenty blind children belonging to the District of Columbia have been under instruction the past year in the Maryland Institution for the Blind, at Baltimore, as beneficiaries of the United States.

#### FREEDMAN'S HOSPITAL.

The whole number of patients in the hospital during the year was 1,000. The number in the hospital June 30, 1879, was 217; the number admitted during the year was 902; 139 died; 752 were discharged, leaving 228 in the hospital at the close of the last fiscal year. About two-thirds of the patients were colored persons.

Of those who were discharged, 585 are reported cured.

A dispensary has been carried on in connection with the hospital.

upon the books of which for the year are borne the names of patients.

This hospital subserves an urgent need of this community, and the continuance of provision for it is commended to the attention of Congress.

The expense of the support and medical treatment of each patient at this hospital is about fifty cents a day.

## TERRITORIES.

### UTAH.

The governor of Utah reports a falling off in the number of mineral claims initiated in the Territory as compared with the previous year.

The number of mineral applications has largely increased, more than doubling that of any previous year, and the number of mineral claims now on file exceeds that of the preceding year by about 24 per cent.

The number of cattle is about 200,000, while there have been exported from the Territory during the year not less than 50,000, at an average price of \$15.50 per head. The number of sheep is fully 500,000, yielding about 2,000,000 pounds of wool, disposed of at about 25 cents per pound. To prevent a decrease in the business of stock raising, the governor favors legislation which will allow stock-raisers to obtain permits other than those given by common consent and by existing law.

Notwithstanding the drought during the summer of 1879, the crop of the cereals proved to be an average one.

The crops of 1880 have, however, been somewhat injured by the lack of water during the summer of 1879, followed by a severe and protracted winter. Dry farming has greatly increased by reason of the rapidly increasing population and the cost and difficulty in constructing irrigating canals.

While this is true, the area reached by irrigating canals is yearly increasing, and much land hitherto untilled is by means of irrigation being brought under cultivation and dotted with farm-houses. The population of the Territory is 145,000, showing an increase of 60 per cent over that of ten years ago. About one-half of this increase has been drawn by the mines of the Territory. The remaining half has been the result of natural increase by birth, together with the proselytizing of the missionaries sent out by the Mormon Church.

The governor believes that the mines of Utah will prove among the richest and most productive of any in the West.

Responsible mining men are reducing mining enterprises to a practical business basis, and many good mining districts heretofore considered unprofitable are now by railroads brought into close connection with the markets, and much of the ore, which on account of its low grade was unprofitable, has now by the superior methods of reducing and extracting

profitable and is being worked. The estimated product of the mines of the Territory up to the end of 1875 was \$21,000,000; since January, 1876, has been, in round numbers, \$24,000,000, or \$6,000,000 yearly, made of gold, silver, lead, and copper. Silver takes precedence, considerably more than half the value named being in that metal. Lead ranks second and copper the lowest in the value of its production.

The number of miles of railroad opened during the past year is reported at 792, which tends to show the rapidly developing business interests of the Territory.

The relations with the Indians are reported as in general satisfactory, many of them having abandoned their tribal relations and engaged in farming and stock-raising.

The conduct of those at the Uintah Agency during the White River troubles has been specially commended by the agent at that place.

The governor in his report dwells at length on the social condition of the Territory as resulting from the teachings of "the Church of Latter-Day Saints," and invites attention to the constant violation of law in the practice of polygamy. With a law of Congress forbidding polygamy and prescribing penalties, which law has by the Supreme Court of the United States been adjudged constitutional, the practice has been and continues to be tolerated in the Territory, though elsewhere in the country it would speedily meet the punishment prescribed. Polygamy is not only tolerated in Utah, but, because of the powerful influence of the organization in which it is practiced, it is made a stumbling-block to position and power. Besides being in direct violation of law, it tends toward a union of church and state too intimate to accord with the spirit of our institutions.

The governor urges that time will not prove the remedy for the evil which can be reached and averted only by a rigid execution of the laws.

The enactment of additional laws to secure the enforcement of the act approved July 1, 1862, to prevent and punish the practice of polygamy in the Territories of the United States and other places, is earnestly recommended to the attention of Congress.

#### WYOMING.

reports a steady advance of the Territory in population, to which the country is well adapted, is the fact that the number of cattle in the Territory is estimated at 375,000.

lack of confidence in the possibility of successful agriculture at an elevation as 5,000 to 7,000 feet above the level of the sea. Industry advances but slowly. In some portions of the Territory crops have been produced without irrigation. This, however, is effected only in the more favorable seasons, but with

proper supply of water there are millions of acres which can be cultivated with a certainty of liberal profits.

The governor suggests that some provisions of the existing timber laws of the United States are embarrassing to the people and a great hinderance to the improvement of the Territory, and that while the interests of the future demand that the forests on the public domain should be protected, something should be done in the interests of those engaged in opening up the new portions of the country. He suggests that the laws relating to timber and timber lands be so modified as—

1st. To insure to settlers, wherever their numbers are sufficient to warrant the survey, the opportunity to purchase timber lands in small tracts and at fair prices, graded and classified within fixed maxima and minima according to relative value.

2d. To allow, in districts where surveys have not been made and lands cannot be purchased, the cutting of necessary timber, at moderate rates for stumpage and under proper regulations, for other than the personal use of those cutting it, that is, for the purchase and use within the Territory of any resident thereof, or of any person or corporation non-resident, yet engaged in making improvements therein.

3d. To prohibit, under any circumstances or conditions, the cutting or removing or the causing to be cut or removed from the public lands of this region, any *green* timber, of whatever size, where sound, dead timber, falling or standing, and suitable for the purpose, can be had.

4th. To grant the freest possible use of any fallen timber wherever found.

5th. To afford yet greater security against forest fires by enactment of more stringent laws, with severe penalties against carelessness in the kindling of fires and against the neglect to extinguish fires already kindled which have served their lawful purpose. The governor remarks that while much destruction of timber on the public lands has resulted from the cupidity and reckless waste of persons using and speculating on the products of our forests, all these depredations combined have been as nothing compared with the waste by fires.

The governor remarks that the surveys of the public lands lag behind the public demand, and expresses the hope that Congress will remove a source of embarrassment to the people by making more liberal provisions for their survey. He also urges that the existing laws of the United States relative to the disposal of the public lands are not suited to the requirements of the territory, for the reason that they do not provide against a monopoly of the water-courses by the few who locate upon the borders of the streams. The necessity for irrigating the soil to make it productive seems to require that some system for disposing of the public lands should be devised by which the water of the streams can be made available to those who may desire to cultivate lands by irrigation. Under the present system the whole Territory will, in time, vir-

a few persons who may own strips of

present faulty constitution of the Territory proper definiteness in relation to their exercise. These courts are anomalous never to have been a proper consideration and conditions under which they must be attendance of jurors and witnesses, the compensation of marshals required of jurors, and criminals, over great disarrangement attendant upon bringing to the country, all these, with yet others, laws are faulty. The courts are of a sort at once Territorial and Federal. The courts of others declare that "the jurisdiction provided for, both appellate and original law." The law, as said before, is not so subject, leaving the courts oftentimes to proceed in Federal cases, but is so to such inconvenient and embarrassing to make of the Territorial law and wanted is not so much definiteness in procedure, fixed by law of Congress, in accordance with which the courts may proceed when exercising the jurisdiction of the United States.

A better system should not be proposed, appeal from the district courts of the Territory, one of the three judges who sit on from whose judgment the appeal does not seem to supply the place of

ing to the Territories, with a view to economy, and adaptation to the existing con-

#### KOTA.

extension of railroads in the Territory, bringing up upon all the lines of travel. The company has four hundred miles of road completed, and it is expected that it will be completed in the Territory during this year.

The population of the Territory at the present time is at 150,000.

The mining resources of the Territory are such that the Black Hills will yield large quantities of minerals to come.



The governor alludes to the great destruction of timber in the forests around the Black Hills by fires started during the dry season, either by carelessness or with criminal intent, and recommends that measures be taken for the protection of the government timber, that an agent be appointed to sell the same for mining and other purposes. He suggests that a small sum expended in protecting the timber will save millions of feet annually, and that unless something is done to this end mining operations will soon be checked by scarcity of timber. He also suggests that the laws now in force are not adequate for the protection of the sections donated by Congress for educational purposes.

The Territory of Dakota having no penitentiary, it has been necessary to transport its convicts to Detroit, Mich., for imprisonment at an expense of nearly \$10,000 yearly to the people of the Territory. It is estimated that \$40,000 will build a penitentiary of sufficient capacity for the present requirement of the Territory. The penitentiaries in other Territories have been built at the expense of the general government, and the propriety of making an appropriation for the building of one in Dakota is submitted for the consideration of Congress.

The financial condition of the Territory has improved so that it is expected that at the close of the present year it will be free from debt.

#### IDAHO.

The governor of Idaho reports that about one-third of the 55,000 acres in the Territory may be considered suitable for agriculture and grazing, besides about one-fifth which might be reclaimed by irrigation. About one-sixth of the Territory is timber land, one-eighth mineral lands, and the balance is mostly arid, being destitute of mineral, timber, or vegetation of any kind.

The soil is generally sandy, with an intermixture of loam in the valleys. In its varied and beautiful scenery, Idaho is perhaps unsurpassed by any State or Territory in the country. Among the wonders of natural scenery may be mentioned the great Shoshone Falls of Snake River, one of the greatest cataracts in the world, equal in height and volume to Niagara.

About one-third of the population are engaged in farming and stock raising. The past year has been a remunerative one to farmers, as crops have been raised, and good prices have been obtained therefor. Only in the northwestern portion of the Territory is the rainfall during the growing season sufficient, however, to insure good crops without irrigation. The governor states that when sufficient moisture is obtained either from rains or irrigation, the yield of all kinds of grain (wheat, corn) and of vegetables is unsurpassed in quantity and quality. He states, yields readily an average of 40 bushels per acre of wheat, an average 60 to 70 bushels, and barley 30 to 40 bushels.

## REPORT OF THE SECRETARY OF THE INTERIOR.

Timothy and clover hay of good quality and large growth are raised; fruit trees and vines grow rapidly and produce abundantly.

The extension of the lines of government survey in certain portions of the Territory is urged, as immigrants are slow to settle upon unimproved lands, however desirable, to which they cannot initiate claim under the pre-emption or homestead laws.

Stock raising is becoming one of the considerable industries of the Territory, attention being turned chiefly to cattle, though the climate and soil are well adapted to sheep and wool growing. It is estimated that not less than 40,000 head of cattle have, during the past season, been sold and driven from the Territory, at an average of about \$5 per head.

The mineral resources of the Territory constitute its chief interest, and the one upon which all other interests largely depend.

Gold and silver in paying quantities were discovered within its limits as long ago as 1852, ten years prior to the formation of the Territory. But the mines were, to some extent, abandoned for those more recently discovered in localities where prospecting and mining could be carried on with less danger from hostile Indians. More recently, however, this danger having been removed, important discoveries have been made, and the industry has revived until now there is scarcely a corner of the Territory that does not contain one or more mining camps.

Gold, silver, lead, copper, and other metals and deposits of fire and pottery clay of the finest quality. Since the discovery of gold and silver in the Territory, it has contributed to the material wealth of the country to the amount of \$100,000.

Although the Indians have, during the past year, been troublesome, there have been no disturbances, and no depredations committed by them, the people having enjoyed undisturbed possession of the localities most exposed to danger. Although the Bannock wars the reservation Indians have remained more generally upon their reservations, yet large parties of them are constantly roaming over the Territory hunting, fishing, and begging.

These parties naturally tend to create a feeling of insecurity among the settlers, especially in remote and isolated localities.

The feeling thus caused is liable to result in the organization of the Indians away, and from such collisions and devastating Indian wars.

This fact presents itself for consideration. Long before the Territory was set apart for the Bannock Indians, portions of the territory selected within the reservation, which fact is liable to create a feeling of insecurity among the settlers, which suggests that these settlers should be paid compensation.

## REPORT OF THE SECRETARY OF THE INTERIOR.

improvements and removed, or stipulation should be made with the Indians by which that portion of the reservation settled by them may be ceded to the government. There is ample room for reservation to admit of the latter course, and he thinks the Indians would readily consent, upon reasonable terms, to such a plan. He believes that many of the Indians, especially of the Nez Percés, many of whom are now thrifty farmers, could be prevailed upon without difficulty to select lands in severalty. Could this be accomplished a large portion of the Nez Percé Reservation, which embraces an extended valuable agricultural land, might be restored to the public domain. The greater portion of the timber in the Territory is in the mountains, which consists principally of pine, fir, and cedar, though it is found to some extent along the rivers and smaller streams.

To prevent the destruction of timber in violation of law, the government recommends the amending of the act of Congress of June 3, 1872, to provide for the survey and sale of the timber on the public lands in every alternate section, with a heavy penalty for cutting or destroying the timber on the sections reserved by the government. This would educate the people and create an interest which it is thought would prevent the wanton destruction of timber.

The population has increased from 20,588, in 1870, to about 40,000, including Indians, in 1880, a gain of nearly 100 per cent.

With the opening up of railroads, it is reasonable to expect a further gain in the next decade. There is at present but one railroad in the Territory—the Utah and Northern, a narrow gauge, running through the eastern part, though other lines have been projected, the most important of which is one to run from Ogden, Utah, to some point on the Pacific coast in the State of Oregon. Though lacking in railroads, the Territory is well provided with first-class stage routes connecting the important points. As before suggested, much of the land, so far as is suitable for agriculture, cannot be made available except by irrigation, and development in this way will be very slow so long as the laws are so restricted in the amount of land which they can embrace. Under existing laws individual interests cannot be large enough to warrant irrigation on any very large scale. The propriety of so amending the desert land laws as to permit the disposal of this class of lands in large quantities to persons or corporations pledging themselves to the building of canals for their reclamation, and restricting them to the withdrawal of the lands from the market and as to the maximum price at which they should be sold, is suggested.

The number of children between the ages of five and twenty-one is about 6,000, and the annual revenues raised for school purposes is about \$100,000. The necessity for making some provision in the interest of the public schools in the Territories is urged upon Congress.

It may be said in general of the Territory that its affairs are in a very satisfactory condition. Good health has prevailed during

war. Agriculture, stock raising, and mining have prospered. Crime is not more common than in older communities in the East, and, with exception, infractions of the law meet with as sure and speedy punishment. The one exception is the utter failure or inability of the officers of the law in certain counties to punish violations of the law of July 1862, against polygamy. Further legislation is earnestly recommended looking to the effectual suppression of this vice, which, under the guise of religion, is spreading throughout these Territories in violation of law and in direct opposition to the moral sense of the people of the country.

### OFFICIAL SALARIES.

In the estimates of expenditures for the next fiscal year I have recommended an increase in the salaries of various officers and clerks in this Department, and in the report of the Commissioner of the General Land Office, presented herewith, there will be found an elaborate and constructive letter addressed to me by that officer upon this subject. There is no doubt in my mind after the experience of nearly four years in the conduct of this Department, that the pay allowed to almost all the higher grades of its officers and clerks is entirely out of proportion to the ability required in the discharge of their duties, the labor exacted, and the great responsibility borne by them. The duties performed by the Assistant Secretary of the Interior are such that I see no reason why his salary should be less than those of the Assistant Secretaries of the Treasury. I am, on the contrary, of the opinion that all the assistant secretaries are underpaid. The public interest demands that the places be filled by men who in the absence of the respective Secretaries may be trusted temporarily to perform their duties and to discharge their responsibilities. Their compensation should be at least equal to that of the Comptrollers of the Treasury.

The office of Commissioner of Indian Affairs is one of the most arduous places in the government, devolving upon him probably more work and responsibility than falls to the lot of any bureau chief in any of the executive departments. Of the Commissioner of the General Land Office and of the Commissioner of Pensions almost the same can be said. These positions require great knowledge of affairs and more than ordinary executive ability. The Commissioner of Patents is a little more favored in point of salary; but, considering the cost of living here, I do not think that in any great government in the world officers of the same rank discharging the same high order of duties, and bearing the same responsibilities, are as badly paid in proportion. Not one of them should, in my opinion, have less than \$5,000 a year. If the American people desire that the public business be well done, and that the high places of government be filled with men of corresponding character and ability, the salaries ought to be such as to command what is required in this respect. Most of the division chiefs in the General Land Office, such as the chiefs of the Mineral Division, the Division of Priv

## REPORT OF THE SECRETARY OF THE INTERIOR.

Claims, the Railroad Division, the Swamp Land Division, the Public Lands Division, &c., have to prepare legal decisions which in the aggregate are of greater number and importance of greater value than the cases decided by any State supreme court in the country. It is true that the decisions prepared by division chiefs are not final, being subject to revision by the Commissioner and to appeal; but nobody acquainted with the business of any other department need be told that the preparation of decisions, which requires a thorough knowledge of questions of fact as well as of the history of legislation and of judicial procedure, is a task of the highest importance. Most of these division chiefs are clerks, receiving at the very highest eighteen hundred dollars and in some cases less. It would seem superfluous to say that these places the highest degree of integrity as well as large talents and talents are needed. In every great government in the world I know of, officers performing these functions would hold a position above that of mere clerks, a tenure not subject to the mere pleasure of a superior officer, and salaries in proportion to the responsibility imposed upon them. Of the division chiefs in the Secretary's office and in the Indian office the same may be said. The consequence is that in many cases men, fully up to the requirements of their positions, find occasion to better their condition by going into the service of private corporations or becoming members of private business. It is a mere question of opportunity, and it is only to be wondered at that such things do not happen still more frequently. During the hard times now behind us many persons have sought and obtained employment in the government service; but now, since all the business interests of the country have revived and the salaries of able men in private concerns are raised to a more remunerative point, the probability is that the government offices will be more and more drained of the ablest public servants. That it will be difficult to fill their places unless their pay be sensibly sufficient to compensate them for their work and they have the prospect of an assured tenure. In this respect good pay is the best remedy. I therefore urgently recommend that the salaries proposed in the estimates of this Department for the coming fiscal year be granted as the maximum but as the minimum pay which those officers ought to have.

I am, sir, very respectfully your obedient servant,

O. SCHURZ,  
*Secretary*

to the PRESIDENT.





The demands upon the office for implements, tools, &c., to enable them to perform manual labor, come from the Indians at a large number of the agencies, and are far beyond the means at the disposal of the department for that purpose. Many cases could be cited in which it has been necessary to deny the requests made for funds to supply the wants of the Indians in this respect, simply because of the small appropriations provided for the purpose. In some cases they have been unable to supplement the insufficient facilities already provided for farming, and what had been accomplished in such instances has become of little or no avail, because of a lack of means to continue the work thus imperfectly begun.

The education of Indian youth is a subject whose importance cannot be over-estimated. As will be shown hereafter, the progress during the past year has not been commensurate with the desires of the office, principally because of the insufficiency of the funds appropriated for that purpose. While the sum provided by Congress for educating Indian youth seems to be a large one, yet it barely suffices to continue the work already begun, and is insufficient to permit of any extended improvement of educational facilities, and wholly inadequate to meet the increasing demands of the service.

The past year has been an eminently peaceful one amongst the Indians. Excepting the incursions of Victoria and his band in Arizona and New Mexico, and the semi-hostile attitude of Sitting Bull and his followers, but little, if any, trouble has been experienced in the Indian country.

#### POPULATION.

The number of Indians in the United States, exclusive of Alaska, is 5,938. These are distributed among sixty-eight agencies at present established in the following States and Territories:

States and Territories.	Agencies, No. of.	Aggreg- ate popu- lation.
Arizona.....	4	
California.....	4	
Colorado (White River Agency abandoned).....	2	
Idaho.....	10	
Illinois.....	3	
Indian Territory.....	7	
Indian Territory (civilized tribes).....	1	
Iowa.....	1	
Kansas.....	1	
Michigan.....	1	
Minnesota.....	1	
Missouri.....	5	
Nebraska.....	4	
Nevada.....	2	
New Mexico.....	3	
New York.....	1	
Oregon.....	6	
Rhode Island.....	1	
Washington Territory.....	7	
Wisconsin.....	2	
Wyoming.....	1	
Total.....	68	

Those not under the control of the agents of the government, numbering 15,802, are principally in the Territories of Arizona, Idaho, and Nevada, and the States of California, Indiana, Kansas, North Carolina, Ohio, and Wisconsin.

## REPORT OF THE SECRETARY OF THE INTERIOR.

### INDIAN EDUCATION.

Reports from the schools on the various reservations are full of encouragement, showing an increased and more regular attendance of pupils and a growing interest in education on the part of parents. Persistent calls for the opening of new schools, or the enlargement of already established, come to the office from every quarter. During the year sixty boarding and one hundred and ten day schools have been in operation among the different Indian tribes (exclusive of the five civilized tribes in the Indian Territory), which have been attended by 7,000 children, and taught by 338 teachers. In the education of Indian youth it is the policy of the office to have farm and domestic work occupy as prominent a place as study in the school-room, and the development of character and training of the pupils in the manners and habits of civilized life is held to be quite as important as acquiring a knowledge of books. But the opportunity for teaching Indian children to live, as well as how to read and think, is found only in the boarding-school, and for that reason the effort of the office during the past year has been directed mainly toward increasing boarding-school accommodations at the various agencies. Only three new schools, however, have actually been put in operation, and four new buildings erected.

The educational work of the bureau could have been enlarged to a much greater extent but for the inadequate appropriations made by Congress for the support of schools. Fifty thousand Indians at several agencies have no treaty school funds whatever, and for educational facilities must depend entirely on the general appropriation for Indian education. Among those tribes there are at least seven thousand children of school age. Exclusive of rations, the cost of clothing, books, and instruction in an agency boarding-school cannot possibly fall below \$10 per capita per annum. The whole appropriation of \$75,000 would therefore enable the office to keep twelve hundred and fifty out of seven thousand children in boarding-schools for the year, or would keep a little more than twice that number in day-schools. But this appropriation must also be used to supplement insufficient treaty school funds at various agencies. The following extract from the act making appropriations for the fiscal year 1866, to fulfill the treaty with the Flatheads of Montana shows the inadequacy of many of the treaty provisions for schools:

For the support of an agricultural and industrial school, keeping in repair the buildings, and providing suitable furniture, books, and stationery, per fifth article of the treaty of July 16, 1865, *three hundred dollars*. For providing suitable instructors the per same article of same treaty, *one thousand eight hundred dollars*.

The sum of four thousand dollars per annum is required for the support of the Flathead boarding-school, of which nearly half must be taken from the general appropriation for schools.

This appropriation must also be used for the erection and furnishing of new school buildings, and the enlargement of those which are already overcrowded.

In compliance with the appeals from neglected agencies, the office has made arrangements for erecting eleven boarding-school buildings during the coming season, and for the establishment of thirteen new boarding-schools. These will be the first schools of any kind ever provided for the eight thousand San Carlos Apaches and Western Shoshone, and the first boarding-schools opened for twenty-five thousand Indians at nine other agencies, where small and irregularly attended day-schools have hitherto met with indifferent success, and made little impression upon the tribes among which they were located. But few of these schools

ll be fairly in operation till toward the close of the current fiscal year, and the expense of their maintenance will not be burdensome until the following year. Increased provision for the support of schools will be absolutely necessary, and I trust that not less than \$150,000 will be appropriated for that object by Congress at its next session.

The importance of having at least one good boarding-school at each agency need not be argued. After the thirteen boarding-schools already referred to have been opened, thirteen more agencies will still be provided for. At not more than fifteen out of sixty-six agencies the government be said to have made adequate provision for the education of the children of the tribes belonging thereto; and at very many of the remaining fifty-one agencies will the schools, both boarding and day, accommodate 50 per cent. of the school population. The necessity for increased and increasing appropriations to enable the office to keep pace with the demands of the Indians for educational facilities is, therefore, most urgent.

An Indian boarding-school similar to that at Carlisle has been established during the year at Forest Grove, Oreg., for the benefit of Indians on the Pacific coast. It is under the immediate charge of Lieutenant Wilkin, U. S. A., and has been in operation since February, 1879. It has two buildings, which will accommodate 150 pupils, and another building is proposed to subdivide into workshops, in which various trades will be taught, have been erected—the latter building entirely by the Indians. Indian boys under the direction of one of the teachers, who is a practical mechanic. Forty pupils are now in attendance, representing thirteen different tribes. For Indians like those on the Pacific, who are in constant close contact with the whites, and who have adopted to a large extent the dress and habits of their white neighbors, the training which a school gives is especially needed, in order to prepare them for competition with white civilization, which must soon be inevitable. The number of pupils in the school will be increased during the year, if the funds at the disposal of the office will allow, but unless some liberal and generous appropriation is made for the benefit of the school, the number in attendance must be kept far below the number of applications for admission.

The attention of Congress has been repeatedly called to the necessity of making some provision for the education of the Alaska Indians, but as far as no action has been taken on the matter. An appropriation of a few thousand dollars for that object would enable the office to educate some Alaska youth at Forest Grove, who, after a few years' training, would be fitted to become teachers among their own people. A comparatively small expenditure in that direction could, in this shape, be made of incalculable ultimate benefit to the Alaska Indians. The Hampton and Carlisle schools now number sixty-six and one hundred and ninety-six pupils respectively. Since November, 1878, one hundred and three pupils, representing thirteen different agencies, have been in attendance at Hampton. The report of S. C. Armstrong, Superintendent of Hampton Institute, which will be found herewith on page 10, testifies to the general good conduct of the pupils, to the gratifying progress made by them in acquiring a knowledge of the English language, and of elementary English studies, and to the interest and aptness which they have taken hold of farm work, and received practical instruction in domestic work and various trades.

The first company of sixty boys and twenty-four girls from the Fort Bidwell and Pine Ridge Agencies reached Carlisle in October, 1879. At that date two hundred and thirty-nine children have been in attendance.

## REPORT OF THE SECRETARY OF THE INTERIOR.

representing the Sioux, Cheyennes, Arapahoes, Kiowas, Comanches, Pawnees, Sissetons, Menomonees, Iowas, Sac and Fox, Lipans, Potomacs, Nez Percés, Wichitas, Apaches, and Pueblos. Ten per cent. of the number have been mixed bloods, and two-thirds of them children of chiefs and headmen. Industrial work occupies a prominent place in the school, and fifty apprentices are learning the trades of carpenter, blacksmith, wagon-maker, saddler, tinner, shoemaker, tailor, printer, and baker. A statement of the work accomplished by them will be found in the report of Lieutenant Pratt, page 300, to which attention is invited. Specimens of articles manufactured by the Carlisle pupils exhibited at the county fair attracted much favorable attention from visitors, and the small premiums awarded the Indian boys and girls for excellent workmanship gave them great satisfaction and encouragement.

Aside from the benefit accruing to the children educated therein, the establishment of these schools has aroused a strong interest in Indian civilization on the part of benevolent people in the East, which has resulted in generous donations to aid in the support and to add to the comfort and happiness of pupils at both Hampton and Carlisle. Moreover, during the summer vacation, forty-eight boys and girls from the two schools were received into various families in Massachusetts and Pennsylvania, where they were given an individual home-training which no institution can afford, and where they gained a practical idea of civilized home-life. The interest thus awakened in the welfare of the Indian race is widespread and increasing, and cannot fail to affect powerfully and beneficially the whole subject of Indian education and civilization.

The rumor which last spring prevailed to some extent, that Indian children were taken to and held at Hampton and Carlisle against the wishes of their parents, was wholly unfounded. On the contrary, Indian parents have urged upon the bureau more children than it was ready to receive, and the office has repeatedly been obliged to deny the request of parents that their children might be educated in the schools. If the funds at the disposal of the office justified it, the number of pupils at attendance at Carlisle and Hampton could be doubled immediately.

In June last, in fulfillment of a promise made when their children were surrendered to Lieutenant Pratt, a "school committee" of chiefs and headmen, representing nine Missouri River agencies, visited Carlisle and Hampton. They were highly pleased with the comforts and the children enjoyed and the care bestowed upon them, and proud of the manifest improvement which they had made. The schools have been visited during the year by delegations from the Lake Superior, Chippewas, the Crows, the Shoshones and Bannocks of Idaho, and the Cheyennes and Arapahoes. Upon them, as upon the Sioux, the favorable impression was made as to the advantages which the schools offered; and their interest in the education of their children, either at home or at a distance, received a powerful impulse, which will be productive of good to their respective tribes.

Of the eighteen Florida prisoners, with whom the experiment at Hampton was first inaugurated, thirteen have returned to their homes in Indian Territory, partly to make room for younger pupils and partly because they had become sufficiently advanced to render valuable service at their respective agencies. Of these, eleven were transferred from Hampton to Carlisle, where they remained for a time to form a nucleus for the new school, and where, Lieutenant Pratt reports, they rendered him most valuable assistance in the care and management of the scholars who came directly from the camps.

Some sickness and several deaths have occurred among the pupils



Carlisle and Hampton. When the first company of scholars was selected for the latter school, it was impossible to secure as thorough examination of the children and to insist as strenuously upon the requirement of perfect health as was desirable, and in almost every instance deaths have resulted from diseases contracted before the pupils reached their homes. The most careful physical examination is now made of every applicant for admission to the Hampton and Carlisle schools, and only those who are certified to by a physician as being absolutely healthy are accepted.

During the year thirty-six children have been selected from the Eastern Cherokees and placed in boarding-schools in North Carolina—twelve girls at Asheville, and twelve boys each at Weaversville and Trinity College. They are to receive training in industrial pursuits as well as in the school-room, and it is hoped that they will thus be enabled to elevate their own people and lead them in the right direction.

But the number who can be educated in Eastern schools is always must be a small fraction of the Indian youth who are entitled to receive an education at the hands of the government, and the need for agency schools is not done away with, but increases yearly. The expense of educating Indians away from their homes will preclude the possibility of more than a limited number ever receiving the advantages which those schools afford. The largest results for the expense made will, therefore, be obtained by selecting from the agency schools the best material to be found therein; at the same time the hope of thus chosen to receive such special training, as a recognition of their merit will operate upon the pupils attending agency schools as a powerful stimulus to earnest and persistent study and work.

#### INDIAN POLICE.

The practicability of employing an Indian police to maintain order upon an Indian reservation is no longer a matter of question. In Indian Territory three years the system has been put in operation at 40 agencies, and the total force now numbers 162 officers and 653 privates. Reports as to the character and efficiency of the services rendered by the police have recently been called for from its agents by the War Department, and those reports bear uniform testimony to the value and efficiency of the police service, and to the fact that its maintenance, which was at first undertaken as an experiment, is now looked upon as a necessity.

The duties performed by the police are as varied as they are important. In the Indian Territory they have done effective work in driving away or turning back unauthorized intruders, in removing squatters, and in driving out cattle, horse, and timber thieves, and outlaws who infest the country. One of the Osage policemen was killed at the hands of a supposed horse thief whom he had arrested while bringing into the agency. Another horse thief, however, was successfully captured and was turned over to the State authorities of Oklahoma for punishment. In Dakota, surveying parties have required no escort than that furnished by detachments of police from the different agencies. In Arizona, the San Carlos police for six years past have rendered invaluable service as scouts; and, in general, at all agencies Indian policemen act as guards at annuity payments; render assistance and preserve order during ration issues; protect agency buildings and property; return truant pupils to school; search for and return lost

## REPORT OF THE SECRETARY OF THE INTERIOR.

stolen property, whether belonging to Indians or white men; prevent depredations on timber, and the introduction of whisky on the reservation; bring whisky sellers to trial; make arrests for disorderly conduct, drunkenness, wife-beating, theft, and other offenses; serve as couriers and messengers; keep the agent informed as to births and deaths in the tribe, and notify him promptly as to the coming on the reservation of any strangers, white or Indian. Vigilant and observant by night and familiar with every foot-path on the reservation, no arrivals, departures, or clandestine councils can escape their notice, and with a disciplined police-force an agent can keep himself informed as to every noteworthy occurrence taking place within the entire limit of his jurisdiction.

Violations of the laws and regulations governing Indian reservations are punished by fine or imprisonment.

The diminished influence of squaw men, the curtailment of privileges formerly claimed by tribal chiefs, and the development of respect for manhood in the police themselves, are among the incidental benefits to the service arising from the police system. It brings to the agency a new element—a party which grasps the idea of the supremacy of law, and which by precept and example inculcates that idea in the minds of others of the tribe. The lessons of self-control, of respect for the rights of others in person and property, of the maintenance of order by law administered by the community instead of revenge obtruded by the individual, when once learned, mark an important advance on the scale of civilization, and rudimentary lessons of this sort are taught by the Indian police system, which calls upon one Indian to arrest and pronounce deliberate judgment upon another for offenses many of which hitherto have not only gone unpunished, but have been unrecognized as meriting punishment.

It is necessary to again call attention to the chief obstacle in the way of perfecting the system, viz, the inadequate pay allowed members of the police force. At two agencies during the year the force has been disbanded, after a successful trial, because suitable men could not be found who would serve longer for the \$8 and \$5 per month which is the limit of salary fixed by law for officers and privates respectively. The very best men in the tribe should be enlisted in this service; but they cannot be expected to enter it at personal sacrifice. Among the more civilized tribes there is as yet but little difficulty on this score, though the difference between the wages of Indian policemen and those of Indian squaw men and the earnings of teamsters and laborers, gives just cause for dissatisfaction. But among the more civilized tribes a progressive farmer, mechanic, or teamster can ill afford to relinquish the comfortable living and the opportunity to accumulate property which his own industry brings to him, for the bare support which is offered in return for his responsible and often arduous and unpopular services as policeman. I must, therefore, renew the recommendations made in previous reports, that Congress be requested to allow the department discretionary power as to salaries to be paid the police at different agencies. The efficiency of the service would thereby be materially increased even though no increase were made in the amount appropriated. The work already accomplished by the police, even with imperfect organization and inadequate pay, should be all the argument necessary to justify such legislation as will enable the office to establish it at every agency on a permanent basis.

The practical workings of the system are clearly set forth in the

lowing extract from a report of Agent McGillycuddy, of the Pine Ridge Agency, Dakota:

On assuming charge of the agency in March, 1879, I found that no force had been organized, the failure to do so being out of deference to the feelings of Chief Red Cloud and some of his coadjutors, both red and white. After several months of the most emphatic refusal on the part of the chiefs to allow the enlisting of their young men, and varied opposition on the part of half-breeds and "squaw-men," I succeeded in organizing the force in the month of August. The "squaw-men" have in the past exercised a very powerful control over the Sioux Indians, and it can therefore be easily understood why they so strongly opposed the introduction of the Indian police system, as it placed in the hands of the government a detective and controlling agency that can easily thwart them in any plans they may form. The chiefs' opposition was partly from the instructions of these "squaw-men;" also because they naturally dislike any innovation, and because it put a power in the hands of the government and agent, independent of themselves, and over which they could not exercise the slightest control.

The Indian police force at this agency consists of fifty members, all Indians: one captain, two lieutenants, ten sergeants and corporals, and the balance privates. The force is in charge of one of the white employés, who also acts as deputy United States marshal. There is also attached to the force one special detective and one special interpreter. The members are all armed with the Springfield and Sharp's Army carbine, kindly loaned the agency by General Sheridan, U. S. A.

The discipline of the force is excellent, failure to obey an order being followed by immediate dismissal. It is made up of the best young men of the tribe, many of them being members of the native soldier organization. There are also enlisted two chiefs, White Bird and Little Big Man, the latter being a Northern Indian, and having taken a prominent part with Sitting Bull in the Big Horn campaign of 1878, afterwards surrendering at the agency with Crazy Horse. A member of the force is on duty all night at the guard-house, making the rounds of the government buildings at intervals of fifteen or thirty minutes, which precludes the possibility of government supplies being surreptitiously made way with.

The police force have rendered varied and very valuable and important service during the past year. Over thirty white men have been arrested by them; some renegades from justice from other States and Territories, and who have been turned over to the proper officials on their arrival for them; some for stealing Indian horses, introducing liquors on the reservation, trading for annuity-goods, larceny, &c., crimes against the United States statutes, and who, after a hearing before Chief Clerk Alder, who is a United States commissioner, have been committed, and have answered for their offenses before the United States court at Deadwood, Dak. Still others have been arrested for intoxication and minor offenses, infractions of agency regulations, and having been convicted before an improvised police court, have been fined or imprisoned temporarily in the agency guard-house.

In addition the police have rendered valuable general service in caring for government property, Indian stock, preventing introduction of liquor, &c., and arresting returning "Sitting Bull" Indians, and preventing the departure north of ambitious young bucks from the agency, should they feel so inclined.

Situated as the agency is, in close proximity to the ever-increasing white settlements, it would be impracticable and almost impossible to conduct this agency without this organization. It represents law and order, and the members, uniformed and disciplined, and far advanced in civilization, offer the best and most practical example for the other Indians of the tribe to copy after, which they are rapidly doing in the way of adopting civilized clothing, &c.

In closing, I would request that, in consideration of the valuable services rendered by members of the police, they having aided the government and white men, as against their own people, an effort be made to induce Congress to allow something more than the somewhat ridiculous compensation of \$5 per month for service. These men have been led to expect more, and it should be given them, for if ever laborers were worthy of their hire, these certainly are.

#### TRANSPORTATION BY INDIANS.

The experiment of intrusting wild Indians with the transportation of their own supplies and annuity-goods from the railroad terminus to the agency was undertaken first at the Cheyenne and Arapaho Agency in the summer and fall of 1877. Wagons and harness were supplied by the government, and ponies were furnished by the Indians. For the whole distance, 165 miles, they were paid \$1.50 per 100 pounds, in cash,

were credited at the rate of \$1.75 per 100 pounds on the purchase of the wagons, harness, &c., which they had undertaken to earn. In the year 1874 105 wagons have become the property of the Cheyennes and Arapahoes. Three hundred thousand pounds were transported the first year, five hundred thousand the second, and during the past year over one million pounds of supplies have been hauled by their teams. During the present year the flour and corn, which last season was delivered to the agency by the contractor, will also be taken by the Indians from the railroad, and will add nearly a million more pounds to the quantities to be freighted by them, thus enabling the agent to give employment to others of the tribe who are now eager to engage in the enterprise.

In the fall of 1875 substantially the same plan was carried out at the Sioux and Comanche agency, in the Indian Territory, and the Sioux agencies at Pine Ridge and Rosebud, and with the same success. During the past year not less than eight million pounds of supplies were hauled by the Indians of the four agencies above named, over distances of 165, 100, 200, and 92 miles respectively, and in compensation therefor they have received the sum of \$115,900. So popular has this branch of industry become that the demands of these Indians for freighting are largely in excess of the quantity of government freight required to be transported, and the letting of a transportation contract for Indian goods to a white man would be deemed an infringement on their rights and privileges.

At the Devil's Lake, Sisseton, Fort Hall, Osage, Kaw, Pawnee, Poncha, Lakland, Sac and Fox, Pottawatomie, White Earth, Great Nemah, Western Shoshone, Grand Ronde, Siletz, Warm Springs, Green Bay, and Shoshone Agencies, freighting is monopolized by Indian teamsters. Even the Utes have fallen into line, and will this fall undertake to transport the goods and supplies purchased for the Uintah Valley Agency.

By this method not only is the amount paid them for transportation much more really saved to the Indians themselves, but the difference between the rates paid Indians and those charged by white transportation contractors results in an actual annual saving to the government of several thousand dollars. Skill and care in the management of the teams, dispatch in the handling and for warding of the freight, and absolute *honesty* and *trustworthiness* in the care of the goods *in transitu*, have characterized the Indian transportation service. Not a package has been lost; not a case or bale broken open or tampered with. The success of the enterprise has made it a permanent feature in the policy of Indian civilization.

#### WAGONS FOR FARMING AND FREIGHTING.

Up to a very recent period, but few wagons were furnished for the Indian service, and then generally only for the use of the agents and their employes at the headquarters of the agencies, to enable them to perform the necessary work of hauling fuel for agency buildings and fodder for the government stock. Within the past five years it has been found advisable to furnish the Indians with wagons for farming purposes, and for freighting their own supplies, which latter purpose, as has already been shown, has become one of considerable magnitude. The following statement of the number of wagons provided for the purposes above stated, since the 1st of July, 1879, will indicate more clearly than it could be done in any other manner the growing interest of the Indians in the cultivation of the soil, and the transportation of the subsistence supplies, goods, &c.:—For the Blackfeet Agency, 15; Che

enne and Arapaho, 57; Cheyenne River, 67; Crow, 14; Crow Creek, 38; Devil's Lake, 36; Flandreau, 30; Fort Berthold, 35; Fort Belknap, 14; Fort Hall, 10; Fort Peck, 10; Green Bay, 43; Great Nemaha, 2; Kiowa, Comanche, and Wichita, 27; Klamath, 18; Lemhi, 19; La Pointe, 52; Leech Lake, 15; Los Pinos, 2; Lower Brulé, 44; Mackinac, 25; Malheur, 4; Moquis Pueblo, 2; Navajo, 11; Nevada, 25; Omaha, 50; Osage, 95; Pawnee, 68; Pine Ridge, 51; Ponca, 42; Pottawatomie, 10; Quapaw, 12; Rosebud, 50; Sac and Fox, 4; Santee, 105; Shoshone and Bannack, 123; Sisseton, 135; Standing Rock, 51; Tule River, 22; Uintah, 32; Umatilla, 20; White Earth, 38; Winnebago, 10; Warm Springs, 5; Yakama, 10; and Yankton, 7—a total of 1,555 wagons. Harness was also furnished with the wagons—a double set with each one required for farming, and two sets for each one to be used in freighting.

Nearly three thousand wagons, with the necessary harness therefor, have been furnished the Indians since 1875, and the flattering prospects of the future, evidenced by the manifest interest of the Indians in farming pursuits, make it almost certain that still larger quantities will be needed by them in the next two years.

#### STOCK CATTLE.

The experiment inaugurated a few years since of furnishing Indians with stock cattle has been so fully developed that the question of their ability and willingness to properly care for and protect the same, when issued to them, is no longer an unsolved problem. The reports from all agencies where issues of stock cattle have been made attest the faithfulness with which the Indians have guarded their trust, and demonstrate the wisdom of the project of instructing Indians in pastoral pursuits, for which a large majority of them are eminently fitted.

Since the 1st of July, 1879, stock cattle have been issued as follows, viz: To the Indians of the Blackfeet Agency, 50; Cheyenne and Arapaho, 500; Crow, 82; Crow Creek, 300; Flathead, 706; Fort Hall, 200; Kiowa, Comanche, and Wichita, 1,089; Lower Brulé, 500; Osage, 900; Pawnee, 400; Pine Ridge, 907; Ponca, 300; Rosebud, 1,000; Sac and Fox, 212; San Carlos, 1,125; Shoshone and Bannack, 765; Standing Rock, 500; White Earth, 52; Western Shoshone, 200; and Yankton, 495,—a total of 10,283 head. These, together with stock purchased by the Indians themselves, and with the "agency herds," which had been accumulated from time to time, (in some instances by the voluntary act of the Indians in accepting a smaller beef ration than they were entitled to, and in other cases by natural increase,) and which herds, with one or two exceptions, have been issued to the Indians during the past year, aggregate a total of 78,812 head of stock cattle now owned by the various Indian tribes. With these cattle as a nucleus, with judicious management and care on their part, but a few years can elapse before the Indians at many of the agencies will be the possessors of large herds of cattle, thus placing within their command the ready means of self-support, and rendering them, to a large degree, independent of the care of the government.

Applications for stock cattle have been made by Indians at agencies not already supplied, and in a few cases by Indians at agencies where only a limited number have yet been provided. They will be furnished as soon as the necessary funds for the purpose can be procured.

#### LEGISLATION NEEDED.

In previous reports, the necessity for legislation upon the following subjects connected with the welfare of the Indians has been strongly urged:



First. The enactment of a law to prevent polygamy, and to provide legal marriages among Indians. Upon this subject nothing can be said more than has been said in former reports. The urgency of legislation to provide proper marriage laws for Indian tribes is apparent, and it is respectfully recommended that the necessity and propriety of such legislation be laid before Congress at its next session.

Second. The amendment of the law in relation to trespassers on Indian reservations. Under existing laws, a trespasser must first be removed from the reservation, and then, if he returns, he incurs a penalty of one thousand dollars. The law as it stands is practically a dead letter, as the trespassers ordinarily belong to the impecunious class, and even if convicted (which is by no means certain), nothing can be realized from them in action of debt to recover the penalty; hence, the delinquents escape unpunished.

A striking illustration of the inadequacy of the law is afforded in the case of the Pyramid Lake Reservation in Nevada. This reservation derives its name from the large lake which is included within its boundaries, and which is valued for its fisheries. At the February term of the United States district court for the district of Nevada, certain fishermen, trespassers, who had been previously removed from the reservation by the military, but who had returned thereto, were indicted and charged with having returned, in violation of section 2148, Revised statutes. The special verdict and agreed facts showed that these men were engaged within the limits of the Pyramid Lake Reservation fishing and dealing and trading in fish; that they were, by order of the proper authority, removed therefrom, and that thereafter they returned and resumed their former business. Upon the trial of the indictments, all the defendants were adjudged guilty as charged, and ordered to appear for sentence on the 15th July, 1879. Upon appeal to the United States circuit court, heard November, 1879, the judgment of the court below was affirmed, thereby establishing: first, that the whole of Pyramid Lake is within an Indian reservation; and, second, that it is Indian territory within the meaning of the intercourse laws, and that trespassers may rightfully be removed therefrom. The defendants were ordered to appear for sentence December 1 and 2, 1879, but for some unexplained reason, probably, as the agent reports, owing to the universal sympathy accorded by all classes of the surrounding community to the offenders, sentence has not been passed, although a year has elapsed since the date on which they were ordered to appear. Recent advice from the agent in charge states that the offenders and those whose interests prompt them to engage in this unlawful pursuit, emboldened by delay in enforcing even the defective statutes which exist, conclude that they have nothing to fear, and are busily engaged in perfecting their plans, securing large quantities of minnows, purchasing boats, and getting in readiness for renewed operations on the lake. The civil power having proved ineffective for the purpose, it will again be necessary to have in the aid of the military forces in order to protect the reservation. The law should be so framed that trespassers on Indian reservation should incur its penalty for the first as well as for every subsequent offense, and that such offense should be punishable by fine or imprisonment, or both, at the discretion of the court.

Third. The enactment of suitable laws for Indian reservations. In the annual reports of this office for some years past the necessity for a judicial system or code of laws for the Indians has been specially commented upon. At the last session of Congress, House bill No. 350, as amended

was favorably reported from the House Committee on Indian Affairs. It reads as follows:

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

That the provisions of the laws of the respective States and Territories in which are located Indian reservations, relating to the crimes of murder, manslaughter, arson, rape, burglary, larceny, and robbery, shall be deemed and taken to be the law and in force within such reservation; and the district courts of the United States within and for the respective districts in which such reservations may be located in any State, and the territorial courts of the respective Territories in which such reservations may be located, shall have original jurisdiction over all such offenses which may be committed within such reservations.

In respect to all that portion of the Indian Territory not set apart and occupied by the Cherokee, Creek, Choctaw, Chickasaw, and Seminole Indian tribes the provisions of the laws of the State of Kansas relating to the crimes of murder, manslaughter, arson, rape, burglary, and robbery shall be deemed and taken to be the law and in force therein; and the United States district court held at Fort Scott, Kansas, shall have exclusive original jurisdiction over all offenses arising in said portion of the Indian Territory.

The place of punishment of any and all of said offenses shall be the same as for other like offenses arising within the jurisdiction of said respective courts.

A similar bill (S. 1560) was also introduced in the Senate. I also refer to House bill No. 3437, 46th Congress, 2d session, as conferring a more extended jurisdiction.

It is of the utmost importance that some such measure as the foregoing should be passed, not only in the interest of peace and good order among the Indians, but also as a necessary factor in the work of their civilization. Under the present system, outside of the five civilized tribes, crimes and offenses committed by one Indian against the person and property of another are remitted to tribal laws or customs for punishment. It is time that this relic of barbarism should cease. The Indian should be taught to know and respect the same law which governs the white man, and to recognize the fact that, while he is amenable to the law, he is equally entitled to its protection and privileges.

I urgently renew the recommendations heretofore made upon all the foregoing subjects.

#### INDIAN LANDS.

In former annual reports of this office attention was drawn to the importance of securing to the Indians a uniform and perfect title to their lands, as a measure conducive in the highest degree to their present and future welfare. In the report for 1878 especially this subject was fully considered, and legislation looking to allotment of lands in severalty to Indians was strongly recommended. As the result thereof, House bill No. 354 was prepared by the department, and submitted at the extra session of the Forty-sixth Congress, but, like its predecessor, which had been introduced at the previous session, it failed to receive action. At the second session of the Forty-sixth Congress, House bill No. 5038, which in the mean time had been prepared as a substitute for H. R. No. 354, was reported by the House Committee on Indian Affairs. This latter bill is fuller and more comprehensive in its details than House bill No. 354, and has received the unqualified approval of this office as a measure well calculated to meet the requirements of the Indians. In this connection I would also draw attention to Senate bill No. 1773, introduced at the last session, which, in addition to providing for allotment of lands in severalty, extends over Indian tribes the protection of the laws of the States and Territories in which they may reside, and at the same time makes the Indians amenable thereto.

the demand for title to lands in severalty by the reservation Indians is most universal. It is a measure correspondent with the progress in which we live, and is indorsed by all true friends of the Indians, as evidenced by the numerous petitions to this effect presented to Congress from citizens of various States. Following the issue of public lands comes disintegration of tribal relations, and, if his land is secured by a wholesome period against alienation, and is protected against the activity of speculators, the Indian acquires a sense of ownership, and begins to appreciate the results and advantages of labor, insensibly preparing himself for the duties of a citizen. I therefore earnestly record the speedy passage of such legislation as may best effect the intended object.

In connection with the general subject of Indian lands, I desire to call attention to the following special bills introduced at the last session of Congress:

Senate bill No. 1630, providing for the removal to and consolidation of the White Earth Reservation, in Minnesota, of several bands of Chippewa Indians now located on various reservations in Minnesota, and such bands as are now located in Otter Tail and Todd Counties and elsewhere in said State, and the Turtle Mountain band of Pembina Chippewas in Dakota Territory; also for the sale of the lands vacated, and investment of the proceeds for the benefit of said Indians, and for all other purposes in relation to them of lands in severalty upon the White Earth Reservation. The White Earth Reserve contains an area of 1,146,672 acres, and is generally adapted to agricultural settlement, whereas the lands now occupied by the Indians whose removal is contemplated are not generally adapted to farming purposes, but are chiefly valuable for the pine timber growing thereon, for which, if the Indian title should be extinguished by sale could be found. The Indians now occupying the White Earth Reservation are rapidly progressing in civilization. They raise large quantities of grain, and are practically self-supporting. The benefit resulting to the Indian from his exchange of a wandering life for a permanent home could not be better demonstrated than by comparing the condition of those now at White Earth with the condition of those who retain their nomadic habits. The passage of this bill would enable the Department to locate the whole of the Chippewas of Minnesota and Dakota, numbering about 12,000 persons, upon the White Earth Reservation, build them comfortable houses, supply them with cattle and agricultural implements, break up land sufficient to secure their support after a few years, leave them a large surplus for future use, and at the same time open up over three millions of acres of land for mining or industrial purposes. One agency, at least, would be abolished, and, with the Indians consolidated on a reservation within twenty miles of a railroad, a large reduction in the present expense of transporting goods to Chippewas on the more distant reservations would be effected.

House bill No. 1139, proposed substitute for the bill (H. R. 1139) for the relief of the Lac de Flambeau, Lac Court Oreilles, and Bad River bands of Chippewa Indians, in the State of Wisconsin.

House bill No. 5624, to authorize the Secretary of the Interior to fulfill treaty stipulations with the Chippewa Indians of Lake Superior and Mississippi.

House bill No. 3884, to fulfill treaty stipulations with the Miami Indians of Indiana, in regard to the payment of certain moneys due them.

The passage of these bills would be of great benefit to the Indians concerned.

I would also call attention to House bill 3613 (Forty-fifth Congress, second session), to provide for the entry of lands by Indians under the homestead laws.

#### RAILROADS THROUGH INDIAN RESERVATIONS.

The revival of railroad building, and resumed construction of the Pacific and lateral roads, the lines of whose routes pass through Indian reservations, has entailed additional labor on this office. In some instances a right of way through the reservations is conferred by the treaty or agreement with the Indians; in others the treaties or acts of Congress creating the reservation are silent on the subject; and, again, there is another class of cases where railroads pass through reserves which have been created by executive order and in which the Indians are mere tenants at will, possessing no permanent right to the lands upon which they are temporarily permitted to remain. In all these cases it becomes the duty of this office, as guardian of the interests of the Indians, to pass upon the applications of railroad companies for authority to enter the reserves, whether for the purpose of making a preliminary survey or for the construction of the road.

As a precautionary measure, and whether a right of way has been guaranteed by treaty or other instrument, or not, upon an application by a railroad company for a right of way or permission to enter a reservation, the Indians interested are invariably assembled in council under the direction of the agent, and consulted as to their views and wishes in the matter, and as to the compensation to be required of the railroad company for the privilege sought. It is gratifying to remark that the Indians, recognizing the importance and necessity of these great commercial undertakings, have so far readily assented, stipulating only for a reasonable compensation, which has been promptly paid by the companies seeking the concession.

In this manner a right of way has been granted through the Sisseton Reserve in Dakota to the Chicago, Milwaukee and Saint Paul Railway Company; through the Otoe and Missouri Reserve in Nebraska to the Republican Valley Railroad Company; through the Winnebago and Omaha Reserve in Nebraska to the Saint Paul and Sioux City Railroad Company, and through the Walker River Reservation in Nevada to the Carson and Colorado Railroad Company. Other applications for right of way through different reservations are on file and in process of determination.

On the great Sioux Reserve in Dakota, preliminary surveys are being made, with the consent of the Indians and under Indian escort, for the construction of two roads, viz, the Dakota Central Railroad and the extension of the Chicago, Milwaukee and Saint Paul Railroad to the Black Hills. By an agreement, dated the 12th of June last, the Sioux Indians granted to the Dakota Central Railway Company the right to occupy one section of land on the western bank of the Missouri River, at or near Fort Pierre, Dakota, for a freight depot; also the right to construct and operate a wagon road from such depot to intersect the wagon road running west from Fort Pierre to the Black Hills. Negotiations are pending with the Indians for the purchase by these companies of the right of way across the reservation, and although there has been some delay, owing to want of harmony between some of the bands, an early and satisfactory adjustment of the question of compensation is confidently expected.

## TIMBER DEPREDATIONS UPON INDIAN RESERVATIONS.

Under this heading, I desire to call attention to a bill (S. 1812) introduced at the last session of Congress, so extending the provisions of section 5388 Revised Statutes, and of other laws of the United States for the protection and preservation of timber belonging to the United States, and for the punishment of offenders who cut, destroy, or take the same, as to make them apply to the preservation of timber on the following classes of Indian reservations, namely: Lands to which the original Indian title has never been extinguished, but which have not been specially reserved by treaty, act of Congress, or otherwise, for the use of the Indians, or for other purposes, although the Indians' right of occupancy thereof has been tacitly recognized by the government; lands expressly reserved by treaty or act of Congress, or set apart for the use of the Indians by executive order of the President; lands allotted or patented to individual Indians who are not under the laws of any State or Territory; lands patented to Indian tribes, and lands which have been purchased by or ceded to the United States for the purpose of settling Indians thereon, but which are as yet unoccupied. The punishment of offenders committing depredations upon such timber is also provided for by this bill.

It is absolutely necessary that some stringent law should be enacted to prevent the continually-recurring depredations upon timber on Indian reservations, and I earnestly recommend the early passage of the above bill.

## SURVEYS OF RESERVATIONS AND INDIAN LANDS.

The necessity for establishing the boundaries of Indian reservations, where such are contiguous to land which is being taken up by white people for agricultural or mining purposes, is daily growing more urgent. Such boundaries ought to be surveyed and well marked out. There remain, unsurveyed, about 6,000 miles of reservation boundaries, one-third of which probably belong to the class above mentioned.

Where it has not yet been done, the arable lands of the reservations ought to be subdivided, to enable the agents to allot to individual Indians such quantities of land as may be directed, and bring into actual use all such lands, even if they are not in the immediate neighborhood of the agencies.

It is to be hoped that appropriations will be made by Congress for these necessary surveys, which are so pressingly demanded to protect the interests of both the white settlers and the Indians.

## INVASION OF THE INDIAN TERRITORY.

In February last information reached this office that a large number of persons were again organizing at various places in Southern Kansas for the purpose of entering the Indian Territory, and making settlements on lands therein which had been ceded to the government for Indian purposes. To encourage this movement, the promoters of the scheme had publicly represented that the President had changed his views in regard to the status of the lands in question since the issuance of his proclamation of April 26, 1879, and that in his last annual message he had admitted that said lands were public and should be settled upon, and hence that they were violating neither the President's proclamation



nor any law of the United States in emigrating to and locating upon such lands.

The attention of the President having been called to the matter by this department, he issued a second proclamation, dated the 12th of February last, which will be found herewith on page 323. This proclamation declared the representations made to be wholly without foundation, and to have originated only in the minds of evil-disposed persons, and again warned all parties who were intending or preparing to remove upon said lands, or into the Indian Territory, without permission of the proper authorities, against any attempt to so remove and settle upon any of the lands of said Territory. It notified all persons so offending that they would be speedily removed therefrom by the Indian agents, and that, if necessary, the aid and assistance of the military would be invoked to carry into execution the laws of the United States in such case made and provided.

Upon the recommendation of this department, a proper disposition of troops was made by the War Department along the line between the Indian Territory and Kansas, to prevent unauthorized persons from entering the Territory, and details were made for the arrest and removal of such intruders as might be found within its borders. These precautions resulted in the arrest, by the military, on or about the 15th of May last, of one D. L. Payne, the recognized leader of the movement, and some eleven of his followers, who had established a camp at a point about 40 miles east of Fort Reno, and about a mile and a half south of the North Fork of the Canadian. Pursuant to the order of the Secretary of War, the intruders were conducted outside the Territory and there discharged, with a warning not to return.

On the 15th of July last Payne and some twenty associates were again discovered in the Indian Territory; were again arrested by the United States forces, and, in pursuance of the order of the President, turned over to the United States marshal for the western district of Arkansas, to be held for prosecution under the United States laws relating to intruders in the Indian country. The prisoners were subsequently released on bail to appear for trial at the November term of the United States district court.

In this connection I desire to call attention to the recommendation, hereinbefore made under the head of "legislation," for an amendment to the laws relating to trespassers upon Indian reservations.

#### SAN CARLOS AGENCY.

The reduction of a wild, roving, defiant, and hostile tribe to a condition of obedience to, and dependence on, the United States Government, and the organization from its own members of an Indian police force, which, for six years, has rendered remarkably efficient service, is the work which has been accomplished in the case of the San Carlos Apaches. That they are inclined to agriculture is shown by the persevering efforts made to construct irrigating ditches and raise small fields of grain, and that they are also ready to have their children educated is shown by their repeated requests that a school might be furnished them. A boarding school building is now in course of erection, for which the Indians are manufacturing the adobes, and steps have been taken to have a substantial dam built and suitable ditches laid out by a competent engineer, which will afford these Indians an opportunity to make some progress toward self-support.

They are becoming discouraged with the slight success which has fol-

lowed their own undirected and unskillful attempts to open ditches; but with the help of a brush-dam, built during the year, under the supervision of Captain Chaffee, temporarily in charge as agent, they have managed to cultivate about 100 acres and to raise 4,000 bushels of wheat, corn, and barley.

In order to become owners of stock-cattle, several families allowed their beef tickets to accumulate until they were entitled to one or more cows, and in that way obtained the nucleus of a herd. This interest in stock-raising has been fostered and stimulated by the issue to them, within a year, of 1,100 head of stock-cattle, which have been highly prized and well cared for by their Indian owners, especially such as have learned to milk the cows, and are beginning to appreciate the value of milk as an article of diet.

There seems to be no foundation for the charge that the San Carlos Indians have aided or abetted Victoria in his lawless raids. On the contrary, the San Carlos Apaches suffered by the depredations of Victoria on their sheep and cattle, and by his attack on a party of Coyoterros at Eagle Creek, in which 11 Coyotero Apaches were killed. Two women were also killed by white soldiers, who mistook them for a part of Victoria's band. The readiness with which groundless rumors of depredations on the part of these Indians can be started is shown in the following extract from the agent's report:

On the 19th of May a report came from General Caw, an operator of the telegraph at Tres Alamos, that Indians had committed serious depredations at Bunker Hill Mining Camp; also, that reservation Indians had gone on the war path in that vicinity. The chief of scouts was sent immediately to ascertain the truth, and returned on the 23d, reporting not a word of truth to exist in the case. No Indians had been seen there for two weeks, save peaceable Indians farming at the San Pedro River—Es-kim-i-zines' and Sagul-ly's band. Two miners, in a drunken quarrel, had killed each other, and on finding the bodies it had been attributed to Indians.

The subject of a water supply, which is an all-important one throughout Arizona, becomes a grave one whenever it concerns an Indian reservation, the prevailing opinion being that Indians have no water rights which white men are bound to respect. Although the San Carlos Reserve is comparatively well supplied with streams, and although scarcely a beginning in farming has been made, the water question is already assuming serious proportions. The agent reports:

The water in Gila is being rapidly depleted by large quantities being taken out by ditches in the vicinity of Pueblo Viejo, twenty miles above Camp Thomas, and a fifteen-foot ditch now being dug by the Mormons in that vicinity will, in low-water, seriously damage the water privileges on this reservation. If there is any law in regard to this, it should be enforced, so that the Indians can be protected in their water rights, a matter of vital importance to their advancement and civilization, as work and education are the foundations for their moral elevation.

Unless obstructions of this character are placed in the way, there is no doubt that the "intractable Apache" can, in a few years, be taught to raise the greater part of his own subsistence, provided he is given a reasonable amount of assistance and instruction, instead of being left to become disheartened by failures resulting from his own ignorance.

#### MISSION INDIANS.

The condition of the Mission Indians of California becomes, yearly, more deplorable. These Indians are composed of the following tribes, viz: Seranos, Digenes, San Luis Rey, Coahuillas, and Owongos. They

are estimated to number about 3,000, and their settlements are scattered over portions of San Bernardino and San Diego Counties, and chiefly in the mountain and desert districts embraced in a range hundreds of miles in extent.

In the last annual report of this office these Indians were made the subject of special mention. Attention was drawn to the fact that many of them were occupying, by sufferance, lands which their ancestors had cultivated from time immemorial, and to which they supposed they had an indisputable right; but that such lands had been found to be within the limits of private land claims confirmed by the courts to grantees under the Mexican Government, before the acquisition of California by the United States; and that the owners thereof were threatening the Indians with summary ejectment.

Legislation, to provide them with suitable and permanent homes, was urgently recommended, but beyond the introduction by Representative Page, of California, of a bill (H. R. 3728, 46th Congress, 2d session), appropriating the sum of \$100,000 for the purchase of San Ysabel Rancho, in San Diego County, which, it may be remarked, is wholly unfitted for the purposes of a reservation, no action was taken in Congress.

By executive order, dated the 17th of January last, a prior executive order, dated December 27, 1875, was canceled (so far as it related to the Aqua Caliente Reservation and a portion of the Santa Ysabel Reservation), as being in conflict with certain prior land grants, severally known as the "San Jose del Valle" and "Valle de San Jose." Referring to this order, Agent Lawson, in his report for the current year, says:

In conversation a few days ago with the present owner of the rancho (San Jose del Valle), he informed me he was about to sell it, and before he could give possession the Indians must be removed. What these people will do in this event, or where they can be placed, so as to find subsistence in this sterile region of country, are questions that I am not able to answer. This is the situation of an equally large body of Indians now occupying the Rancho San Jacinto, their ejectment being liable to occur at any time. This, in short, is the situation all around; and there being no unoccupied public lands, except such as are uninhabitable, the only alternative left to these hitherto peaceable and thrifty communities is to wander about singly or by families to swell the vagabond class that already infests the villages and towns, to become a prey to vices to which, as yet, they are comparative strangers.

The agent also reports that about fifteen families under similar circumstances were a few months ago forced to remove from the Cucco Ranch, in San Diego County.

In the season of 1879 the supply of water for irrigating purposes on the desert, some 50 to 80 miles distant from the agency, where hundreds of these Indians live, entirely failed, and they were compelled to depend for subsistence upon a wild bean which grows in the desert. Never having received any aid from government, and being accustomed to the miserable destitution enforced by their helplessness, they endured hunger and want without seeking or expecting aid. Then, for the first time in their history, their agent, learning of their condition, applied for assistance, and the department promptly responded by ordering a sum of \$500 to be expended in supplies to relieve their wants.

The Mission Indians as a class are reported to be industrious, sustaining themselves by cultivating their little fields or in laboring for ranchmen in the vicinity of their villages. During the sheep-shearing season their services are greatly in demand, as they are especially skilled in this kind of labor. In the interest of common humanity something should be done for this uncomplaining people towards providing them with a home. They do not ask for supplies. All they ask for is a reser-

vation upon which they can earn a subsistence for themselves and families.

Their educational and religious interests have hitherto been entirely unprovided for. Recently the department has authorized the building of two school-houses in two of the larger settlements. But little, however, can be effected in this direction until the tribe is consolidated upon suitable lands and brought under the controlling influence of the agent, and to this end I earnestly recommend the passage of appropriate legislation in their behalf.

#### UTES.

In the last annual report of this office it was recommended that legislative authority be invoked for the appointment of a commission who should visit the Utes and obtain their consent to remove from the State of Colorado to some other location, on condition of their receiving pay for the value of their lands in Colorado. Subsequent to the date of that report a delegation of the Utes, composed of chiefs and principal men from the bands located on the White River, Los Pinos, and Southern Ute Reservation, visited Washington to confer as to the best course to be pursued in regard to a settlement of their affairs.

The result of the negotiations was the agreement dated March 6 and the act of Congress approved June 15 last, which will be found on page 315 of this report. Under the second section of this act, the President appointed Hon. George W. Manypenny, Alfred B. Meacham, John B. Bowman, John J. Russell, and Otto Mears commissioners to secure the ratification of the agreement and to execute the provisions of the same.

The period within which the agreement was to be ratified by three-fourths of the adult male Indians of the Ute tribe was limited in the act to four months from the date of its approval, or until October 15, 1880. The requisite number of Indians signed the agreement between the 29th of July and 11th of September, both days inclusive. The ratification of the agreement by the Utes was certified to the Secretary of the Treasury by the Secretary of the Interior on the 24th of September last, and steps were immediately taken to cause the money appropriated under the 4th clause of section 9 of the act, to be paid to the Indians.

Under the provisions of the first clause of the above-named agreement, no payment will be made to the White River Utes until the surrender or apprehension of those members of their nation, not yet in the custody of the United States, who were implicated in the murder of Agent Meeker, and the murder of, and outrages upon, the employés of the White River Agency, on the 29th of September, 1879; or until the President shall be satisfied that the guilty parties are no longer living, or have fled beyond the limits of the United States.

A portion of the surveys contemplated by the act and necessary for the location of the Indians has been made, but, in consequence of the delay in the passage of the bill and the consequent lateness of the season when the agreement was ratified, comparatively little could be done towards locating the Utes in the localities designated for them, and operations in this direction have been suspended until next spring.

#### *The killing of the son of Chief Shavanax.*

Just before the Ute commission had suspended its work, the Indians of the Los Pinos Agency were thrown into a feverish state of excitement by the murder, by a white freighter, of Johnson, son of the Chief Shavanax. The difficulty occurred on the evening of the 29th of September

last, at what is known as Cline's Ranch, about thirty miles distant from the agency, on the Cimmarou. Early the next morning some thirty Indians, headed by Chief Shavanaux, and all well armed, came to the agency, and made known their errand. They were very much excited, and fully determined upon revenge. The agent, after much effort, succeeded in quieting them, and taking with him a military officer and a file of fifteen soldiers, furnished by the commandant of the post at the agency, proceeded with them to the scene of the outrage for the purpose of arresting the murderer. On arriving at the ranch he found that the criminal had been arrested, and was in charge of a number of citizens of Colorado. After due consideration, it was deemed best to place the prisoner in charge of three well-known Colorado citizens, in whose custody the agent found him, to be taken by them to Gunnison City (the nearest court having jurisdiction of the crime), and there turned over to the proper law officers of the State. The Indians and all others seemed apparently well satisfied with this arrangement, and the agent advised the Indians to return to their homes, whereupon, as was supposed, they all left, taking the trail across the mountains leading to the agency. The agent, the military, Colonel Meacham, and others left for their respective stations soon after.

The Indians, however, instigated by certain lawless white men, returned to the ranch the next morning, accompanied by these white outlaws, and finding that the citizens had left with their prisoner for Gunnison, went in pursuit, overtook and overpowered them, took possession of the prisoner, and in all probability speedily killed him.

A warrant was soon after issued by a justice of the peace at Gunnison for the arrest of Agent Berry on a charge of murder, but, not deeming it safe to submit to such a proceeding, and believing that the clamor raised in that vicinity would result in an application of lynch law to himself and others, he kept himself aloof from the jurisdiction of said justice and other State officers until due process was issued by a higher tribunal, when he voluntarily gave himself up to the custody of the United States marshal, and was taken by him to Denver, where he awaits his trial on a charge which, it is believed, has no foundation in fact. The statement made by the agent is fully sustained by Maj. R. H. Offley, the military officer who had charge of the troops and accompanied him to Cline's Ranch. In his report of the matter to the War Department he says: "The Indians seemed to be acting with the utmost forbearance and calmness, desiring nothing but the punishment of the individual who had committed the outrage upon them. \* \* \* The man who shot and killed the Indian was a stranger in this part of the country, and this was his first trip over the road, and it was stated by parties who saw the men connected with this train that they were under the influence of liquor."

It seems that the Indians applied to the freighters for food, and from their own statements and the evidence of others they were somewhat roughly repulsed. Major Offley says that the testimony of the Indians themselves seems to be straightforward and trustworthy; that they disclaim firing upon the white men or quarreling with them; that they were mounted, and when food was denied them turned their horses to leave, and that Johnson was shot "and fell dead from his horse after going about a hundred feet." That officer adds: "With the light before me I cannot look upon this matter otherwise than as a wanton and unprovoked murder of the Indian by a reckless, half-drunken teamster, and that the fate of the murderer was a clear case of lynching, which, as much as it is to be deplored, is not an uncommon occurrence throughout the



country in the midst of civilization and enlightenment." In regard to the recapture and lynching of the prisoner, Major Offley says that white men were with the Indians when they committed the offense, and that "they encouraged and assisted them to lynch him." In regard to the freighter, he also makes the following statement:

The man Jackson, who was in charge of the train, has told different stories about the affair; he told me that the Indians did not fire at his party; to others he has said they shot twice. He has claimed relationship of nearly every kind to the man who was killed; he told me he was one of his men or boys. He has also said that the party who had charge of the prisoner followed the cavalry to near the Blue; the cavalry did not get to Cline's until the evening of October 1; the prisoner was taken about 11 o'clock in the morning of that day; he also states that Cline [one of the citizens who started with the prisoner to Gunnison] was home in about an hour after starting, whereas he did not get back until next day. The Indian, Johnson, has been employed by Col. Mackenzie during the summer, and was considered a quiet and peaceable man.

#### THE SIOUX.

Among the 32,286 Sioux who are gathered at 11 agencies—9 in Dakota, 1 in Montana, and 1 in Nebraska—peace and good order have prevailed throughout the year. At Santee, Sisseton, and Devil's Lake Agencies self-support is nearly reached, the proportion of the subsistence for those Indians which is derived from the issue of government rations being 35, 20, and 25 per cent., respectively. They are located in severalty, live in houses, wear citizen's dress, send their children to school, own farming implements and stock, and their crops during the past year will average ten bushels of wheat, five bushels of corn, and sixteen bushels of vegetables to each member of the tribe. With such crops, which would furnish ample support for a white man, even a partial issue of rations would seem to be unnecessary, but allowance must be made for Indian appetite and Indian improvidence, and also for what the Indians would consider unjust discrimination on the part of the government, should their Great Father, while issuing rations to his wild and indolent children, entirely withhold them from those who are industriously endeavoring, in every way, to comply with his wishes. Moreover, their surplus crops are largely invested in the purchase of farming implements, cattle, and other appliances of civilized life which directly advance their own civilization, and which would otherwise have to be furnished by the government.

About three-fourths of the Sioux at the Yankton Agency have made equal progress in adopting the customs of civilized life.

At Cheyenne River, Crow Creek, Standing Rock, and Lower Brulé Agencies progress was seriously retarded by the Sioux war, three years ago; but the erection of 718 houses, the selection of individual farms, the breaking of nearly 600 acres (in addition to 1,800 acres previously under cultivation) and the raising of 41,000 bushels of wheat and corn, and 12,000 bushels of vegetables by these Indians during the past year, shows them to be again under the influence of the advance movement which prevails throughout the entire Sioux nation. They remain quietly at their agencies and depend for subsistence, principally, on the issue of government rations. At the Lower Brulé Agency a boarding-school building is in course of erection, and at the others three good boarding and four day schools have been attended by 300 pupils.

The 4,713 Yanktonais Sioux at Fort Peck, with the 1,116 of the Northern Sioux who have deserted Sitting Bull's camp, and, after surrendering arms and ponies, have attached themselves to the Fort Peck Agency, are the only Sioux who now engage in hunting to any extent. T

are wild, blanket Indians, who have recently made a small beginning in civilization by the putting up of 32 log houses and the cultivation of 204 acres. A boarding-school building, to accommodate 50 scholars, is in course of erection, which, without doubt, can be filled with pupils as soon as completed.

During the winter of 1878, the Ogallalla and Brulé Sioux, under Chiefs Red Cloud and Spotted Tail, removed from the Missouri River to locations in the interior of the Sioux Reserve, which had been selected for them by a commission, and where it was hoped that they would be satisfied to remain. That the Indians themselves look upon these locations as their permanent homes is evidenced by the zeal and enterprise with which they have undertaken the opening of farms and building of houses. They now occupy 700 log houses, which have been built mainly by their own labor, and for which the government has furnished only the doors, windows, nails and other necessary hardware. They are cultivating 2,200 acres, and own 300 mules, 5,600 head of cattle, and 280 swine. In the spring, farm-work was begun promptly, and gardens and fields were carefully cultivated; but an early drought deprived the Indians of the reward of their efforts. This disappointment may cause some of them to turn their attention more particularly to stock raising, to which the country is admirably adapted. The exceptional care and attention bestowed upon the stock cattle issued to them strengthens the belief that their self-support by this branch of industry is entirely practicable, and should encourage the government to continue the issue of cattle until every deserving family is supplied.

The enthusiasm with which they engage in freighting has already been referred to, and their desire to adopt a civilized life is still further shown in their increasing tendency to locate their houses upon their farm lots at wide distances from each other, instead of crowding together in one central camp or village. On the Pine Ridge Reservation, where one year ago all the Indians were within a radius of six miles, settlements are now to be found at varying distances up to forty miles from the agency. With but one or two exceptions their behavior has been orderly and peaceable during the year, and a fairer record could not reasonably be asked for from 14,000 wild, restless Indians, who four years ago, during the Sitting Bull campaign, furnished the largest number of recruits for the hostile ranks.

The following incident from the report of Agent Cook, of the Rosebud Agency, shows the dependence which can be placed upon the Indian police, and gives striking proof of the loyalty of the Spotted Tail Sioux, and of the sincerity with which they are undertaking to conform to the usages of civilized society.

A small party of Brulé Sioux, headed by Turning Bear (a reckless young warrior), started north. I sent a detachment of the United States Indian police, with instructions to bring them back. They found no trail northward, and returned. Turning Bear, in company with Bear Man, Grey Dog, Bad Thunder, Two Calf, and Horned Horse, left the agency and, instead of going northward, went over near the Loup, in Nebraska. Their ostensible object in making this journey was to recover stolen horses. In plain terms, it was a horse-stealing raid, and they made a success of it. In addition to stealing seven head of horses, of which they boasted on their return, they killed a white man, name unknown. I at once took the necessary steps towards their arrest, and, with the cheerful assistance of Spotted Tail and Crow Dog, captain of police, I was successful. When the prisoners were brought in, I plainly but quietly told them the course I was bound to pursue. The arrest and holding under guard six young men (all great favorites with the chiefs and headmen) was not unattended with trouble and danger, but with patience, intermixed with a moderate degree of firmness and kindness, they were finally given up to be tried according to the laws of the whites. They were held in arrest until the following day, when, with a strong detail of Indian

police, under command of Captain Crow Dog and a single white man, S. M. Bay, chief of police, they were without trouble sent to Fort Randall, there to be held subject to the requisition of the governor of Nebraska for trial. Crow Dog and his detail reported, on the 15th of August, that the prisoners had been transported in safety and without serious trouble, and had been regularly turned over to Col. George L. Andrews, commanding Fort Randall, Dakota. Much credit is due to Spotted Tail, Crow Dog, and others, for the part they took in the matter, as without their assistance it would have been vastly more difficult to have brought this trouble to a satisfactory ending.

#### MAGA-BOB-DU, OR DRIFTING GOOSE'S BAND OF SIOUX INDIANS.

Prior to 1879, this band, numbering about 150 souls, occupied a small tract of country on the James River in Dakota. They had a few acres in cultivation and were mainly self-supporting. They remained friendly to the whites during the Sioux outbreak in 1862, some of them serving as scouts for the United States troops under the command of Gen H. H. Sibley.

In 1878, the fertile lands occupied by them attracted white settlers to that region. In order to enable this office to determine the rights of these Indians to the lands which they occupied, three townships, embracing their homes, were set apart as a reservation by Executive order dated June 27, 1879. The General Land Office records showed that up to February 28, 1879, only one homestead and four pre-emption declaratory statements had been filed in the local land office for lands in said townships. The agent at Sisseton Agency was directed to go to the reservation, and, with the assistance of the Indians, ascertain the extent and character of the improvements made by themselves, as well as the number and location of whites within these townships and the improvements made by them. It was found that all the buildings erected by the Indians were on two quarter-sections, and that the land tilled by them was in patches on six quarter-sections. Thirty-six whites had settled in said townships.

The Indian title to the lands falling within said reservation was extinguished by the Sioux treaty of 1868, and the agreement called the Black Hills agreement of 1876. It was finally concluded that the right of the Indians could not be successfully maintained as against the adverse claims of the whites, except, perhaps, to the two quarter-sections on which their houses were built; and the Indians were informed that they could initiate homestead claims only on such portions of the townships set aside for their use as were not, at the date of the Executive order, occupied by the whites.

The Indians finally agreed to remove to the Crow Creek Reservation, where there is an abundance of good land, and requested that some one from this office be sent out to assist them in selecting locations on that reserve. This has been done, and in July last, individual selections were made for such of the members of the band as were present at Crow Creek at that time. It is hoped that Congress will authorize the issue of patents for these selections, so that these Indians may not again be deprived of their homes.

#### FORT HALL AND LEMHI RESERVATIONS, IDAHO.

In May last a delegation of chiefs of the Shoshone, Bannack, and Sheepsteater tribe of Indians belonging to the Fort Hall and Lemhi Agencies visited Washington, and an agreement was entered into with them, whereby the chiefs and headmen representing the Indians of the Lemhi Agency agreed to surrender their reservation at Lemhi, and to remove to and take up lands in severalty upon the Fort Hall Reserva-

tion. By the same agreement the chiefs and headmen of the Shoshones and Bannacks of Fort Hall agreed to cede to the United States a portion of the southern half of their reservation, including Marsh Valley and the settlements therein.

By the terms of the agreement the United States, in consideration of such cession, agrees to pay to the Lemhi Indians the sum of four thousand dollars per annum for twenty years, and to the Fort Hall Indians the sum of six thousand dollars per annum for twenty years, in addition to any sums to which said Indians are already entitled by treaty provisions. The United States further agrees to cause the lands of the Fort Hall Reservation to be surveyed and allotted to the said Indians in severalty, in the proportions mentioned in said agreement, and to issue patents therefor, with restrictive clauses against alienation, &c., so soon as the necessary laws are passed by Congress.

In anticipation that the agreement would be confirmed, a bill to accept and ratify the same, and to make the necessary appropriations, was prepared in this office and submitted to the department, and introduced in both houses of Congress at the last session (H. R. 6226 and S. 1759). So far as the Lemhi Indians are concerned, that part of the agreement which relates to them becomes inoperative, the tribe having since declined to remove to Fort Hall. I therefore recommend that so much of said agreement as relates to the Fort Hall Indians and their reservation be accepted and ratified by Congress.

#### FORT HALL AGENCY.

During the year encouraging progress has been made in the work of civilization at this agency.

The effort to assist these Indians was seriously embarrassed and retarded by the outbreak of a portion of the tribes in 1878, but the evil effects arising therefrom have been to a great extent overcome, and the agent reports that many of the Indians who participated in the outbreak referred to are now among the most industrious farmers and laborers at the agency, having come to the wise conclusion that it is better to remain quietly at home than to go on the warpath.

A boarding-school has been established which, commencing with three scholars, gradually increased until at the close of the session there were twenty-seven children in attendance. The agent, in his report, expresses the opinion that "this school is the very foundation of the civilization of these two bands of Indians, and its success is consequently of greater importance than any other matter connected with the agency." The success of the same is so far assured that more pupils will probably be furnished the present fall than can be accommodated.

The 1,040 Shoshones and 460 Bannocks at this agency have 460 acres of land in cultivation, upon which they have raised this year 5,750 bushels of wheat, 1,025 bushels oats and barley, 3,500 bushels vegetables, and 180 tons of hay. In addition to the above, 42,000 feet of saw-logs have been cut in the mountains, hauled to the saw-mill, and converted into lumber by the Indians, with the assistance of a sawyer, who ran the machinery of the mill.

Two dwelling-houses and eight granaries have been erected during the year, in the building of which the Indians have performed much of the labor. There have also been erected a dwelling-house for the farmer, 24 by 40, an addition to the commissary, 20 by 40, and an extension to the ice-house, 20 by 12.

## AGENCIES IN THE INDIAN TERRITORY.

Whatever changes have occurred among the tribes in the Indian Territory during the year have been in the line of improvement. At the Quapaw Agency the necessity for issues of rations, except to the aged and helpless, ceased long since. The Indians of the eight small tribes belonging thereto wear citizens' dress, are comfortably housed, have ample school facilities, and are virtually civilized. But though they have reached the position of self-support, they have not acquired self-reliance, and the watchful care of the government must not cease for several years to come. Schools must be supported, employes furnished, implements repaired and occasionally replaced, buildings must be kept in order, and the whole machinery of an agency must be continued; otherwise from the money and labor expended in the past will be realized merely a temporary instead of a permanent good.

The Absentee Shawnees of the Sac and Fox Agency may be included in the above classification, but the conservative Sac and Fox, and the restless Mexican Kickapoos, although they have learned to depend on farming for about half of their subsistence, are very slow to adopt civilized dress and customs, and the aversion of the latter to both houses and schools is yet to be overcome.

The Poncas are referred to at length on page xxxv.

The Nez Percés, attached to the Ponca Agency, are especially interested in the day school which has been opened among them, and which is taught by James Reuben, a full blooded Nez Percé Indian, who received his education at the Nez Percé Agency in Idaho. He is entirely devoted to the best interests of the tribe, labors among them as missionary as well as teacher, holds intelligent religious services on the Sabbath, which are well attended, and in every respect exerts an admirable influence. The grace with which the Nez Percés are submitting to the inevitable, and the prosperous condition to which they may and probably will soon attain, is shown by the following extract from the annual report of Agent Whiting:

When the facilities to work with are taken in consideration, the Nez Percés have made good progress the present year. With only twenty-three teams at their disposal, they hauled all of their supplies one hundred miles from terminus of railroad, besides breaking one hundred acres of prairie, and hauling logs for houses. They have more garden vegetables, potatoes, melons, &c., of their own raising than they can make use of, and they have asked for wheat to sow this fall.

The ninety-six head of two-year-old heifers and four bulls received for the Nez Percés were issued to them July 20, 1880. The Indians are taking excellent care of their cattle, and appear to be natural herders, and show more judgment in the management of their stock than any Indians I ever saw. We are now sawing out lumber for the purpose of erecting houses for Indians, and I hope to have them all comfortably housed before cold weather.

The Nez Percés are an intelligent, religious, and industrious people, ready and willing to work and help themselves, and if agricultural implements, sufficient stock to work their land, and seeds are furnished them, they will do much towards supporting themselves another year.

The Pawnees are slow to renounce the life and habits of the Indian, and but a small proportion have yet adopted civilized dress or exchanged their tepees for houses. Farms are principally worked by the bands in common, and the crops are divided according to the labor performed. Several individuals, however, have undertaken independent farming, and their example will be followed by others until the clannishness of the tribe is gradually broken down. Their crops, consisting of 1,980 bushels of wheat and 4,000 bushels of corn, will relieve the government of nearly one-fourth of their support.



In school matters they are more progressive, and have sent 120 children to the boarding school. In complying with the educational terms of the treaty, the Pawnees have been much more faithful than the government. According to the treaty, "the United States agree to establish among them two manual-labor boarding schools, and the President of the United States, if he deem it necessary, may increase the number to four. The Pawnees, on their part, agree that each and every one of their children between the ages of seven and eighteen shall be kept constantly at these schools for at least nine months in each year." The chiefs are to be held responsible for the attendance of orphans, and failure or refusal of the parents to keep their children in school is punishable by deduction from the annuities. The establishment of another boarding school is not considered advisable at present, but the opening of four day schools, one in each band, as proposed by the agent, will nearly fulfill the conditions of the treaty. With the right kind of teachers, who will, in addition to work in the school-room, look after the general interests of the bands in whose midst they are located, these schools will constitute four civilizing centers, and the influences going out therefrom will be felt in every part of the tribe. There is no doubt that a well-organized system of neighborhood day schools, carried on in connection with a central boarding school, will at many agencies exert a more powerful and a more rapid influence over the whole tribe than if boarding schools alone were attempted, especially in view of the fact, already referred to, that the funds which can be applied to the support of boarding schools are utterly disproportioned to the number of children ready to be educated in them.

The jealousy of factions, national conservatism, and a superabundance of tribal funds (which took away the necessity for labor) have conspired to keep the Osages farther down in the scale of civilization than other tribes which are less advantageously placed, and have received less attention from the government. Out of 1,600 full-blooded Osages only eight have yet adopted civilized dress. At the same time the new interest in house-building, which has sprung up during the year, and especially the request of the Osages that *all rations except the beef ration be discontinued*, mark an important era in their tribal history, and rapid progress from this time forward may reasonably be expected. Their efforts at farming have been commendable, but owing to the drought but 20,000 bushels of corn have been harvested from 1,999 acres. The cattle fever has also made serious inroads on their herds. The schools have been better filled, and the attendance of the children has been more regular than ever before. Freighting has been taken hold of with energy and zeal, and the only difficulty with which the agent has to contend is "to decide who shall have the preference in getting the business."

Equal interest in freighting is shown by the Kaws, and in most respects their condition is similar to that of the Osages, except that they are still willing—to use an expression of the Osages—"to be fed like dogs," and manifest no desire to have any portion of the regular ration discontinued. The 200 Quapaws who have gradually left their own reserve (where they had become thoroughly demoralized) and settled among the Osages, seem to have been benefited by the change, and begin to show a disposition to work. The few implements issued to them in the spring were so gratefully received and faithfully used as to encourage the office to make further efforts in their behalf.

For the "wild tribes" in the Territory—the Cheyennes, Arapahoes, Kiowas, Comanches, and a few Apaches—the year has been an especially quiet and prosperous one. Freighting has turned into a healthy direction some of the surplus energy of Indians, who, while they have

decided to remain at agencies and draw rations, have yet found in farming and other civilized avocations no acceptable substitute for the freedom of life on the plains.

The removal of the Kiowa and Comanche Agency from Fort Sill to the Washita River, which has been contemplated for several years, and has been strongly recommended and as strongly opposed, was effected last fall; and on the 4th of December, 1879, the first issue of rations was made from the new ware house. The advantages of the new location have proved to be all that the advocates of the removal claimed for it. The distance of the Indians from the Texas line, and the fact that a military post is between them and the line, has nearly put an end to the raids of horse-thieves upon their herds. Except a few Indians who possessed houses and cultivated fields in the vicinity of Fort Sill, the Kiowas, Comanches, and Apaches have moved up to the Washita, and are settling down, not as before in large crowded camps, but in small groups and by families, and they are opening up separate farms instead of cultivating one large body of land in common. In this way tribal relations are being modified and the influence of chieftainship impaired. One Kiowa, who two years ago plowed his first corn-row in a field held in common by his tribe, has now a well-tilled forty-acre field of his own, which he has surrounded with an eight-rail fence, with a stone under each corner. With \$50 saved from wages paid him for freighting, he has bought 3 cows and calves with which to start a herd. A willingness to dispose of ponies for articles more helpful to civilization, and a disposition to adopt citizens' dress, are most favorable indications. Twelve hundred acres have yielded about 12 bushels of corn to the acre. Eight hundred acres have been broken, but only for Indians who had first surrounded, by a substantial fence, the ground to be plowed. A new school-building, which will accommodate 200, is nearly completed. One hundred children, all that could be accommodated in temporary quarters, have attended the industrial boarding school during the past year.

The Northern Cheyennes under Little Chief have remained quietly at the Cheyenne and Arapahoe Agency, although fears were entertained in some quarters that they might make an attempt to escape to the north during the summer. Little Chief refuses to allow the children of his band to attend school, and makes no concessions to civilization. The fact that Little Wolf and his band are still with the military in the Powder River country, undoubtedly keeps alive for Little Chief the hope that he may eventually be allowed to return there, and in the mean time he is careful not to commit himself to any of the ways of the white man. Ten wagons were purchased for his band, but only four young men had the courage to brave his displeasure and accept them. The Southern Cheyennes and a portion of the Northern Cheyennes manifest exactly the contrary disposition, and, with the Arapahoes, engage in every kind of remunerative labor which the agent can furnish them—freighting, making brick, burning lime, hauling stone, &c. In fact, the demand for work of this character is much greater than the supply, and is so persistent as to severely tax both the ingenuity and the resources of the agent. In farming, which does not give immediate returns for the labor expended, the Arapahoes have shown considerably more interest and perseverance than the Cheyennes. Owing to the drought, however, but 9,540 bushels of corn have been raised from 1,180 acres. A great drawback to energetic farming among both tribes is the uncertain status of their land title. Until the tract which they now occupy is confirmed to them by act of Congress, they will be slow to settle down and make permanent improvements thereon. The two boarding-schools have been

attended by 308 pupils, a good showing for Indians who are still wearing their blankets and living in tepees.

All of the 1,237 Wichitas and affiliated bands belonging to the Kiowa Agency, except the Caddoes and Delawares, continue to advance in industry and thrift. They wear citizens' dress, live in houses, cultivate on the average one and four-fifths acres each, and, at times, require but small issues of rations. Self-support might have been attained by this time except for their proximity to and association with the wild Kiowas and Comanches. So long as these tribes must, for the sake of peace, be fed by the government in comparative idleness, their industrious neighbors will feel that they have a just claim to at least partial subsistence from government stores. The issue of any but beef rations to the Caddoes and Delawares has been stopped. They have so lost their ambition as to have actually retrograded instead of advanced for some years past, and it is hoped that with the necessity for exertion will return the energy and enterprise which a few years ago placed them in the front rank of the affiliated bands. In the new boarding-school building 127 children have been taught—about one-third of the children of school age belonging to the tribe.

Self-support by farming cannot reasonably be expected of this generation of Indians in a country so liable to drought as that now occupied by the Kiowas, Comanches, Cheyennes, and Arapahoes. The actual loss of the crop once in three or four years will seriously affect the progress of a people who are both improvident and easily discouraged, and a new industry which will promise a reasonably sure return for the labor expended must be introduced. The Indians are therefore turning their attention more and more to stock-raising, and 1,100 head of cattle have been bought for them during the year. Thus far the temptation to use them to supplement the insufficient government ration has been resisted, and it is hoped that the same pride and satisfaction which the Indian now takes in his herd of ponies will, before long, be called out by the ownership of a herd of cattle.

#### PONCAS.

The prosperous condition of the Poncas in the Indian Territory, referred to in the last annual report of this office, continues. The agent reports that since the 1st of January last over seventy families have moved into houses, the total number occupied being seventy-nine.

Meddlesome persons are still endeavoring to induce the Poncas to abandon their present location and return to Dakota, but the leading men of the tribe have frequently assured the agent that they are satisfied, and do not desire to return. The efforts of such persons, however, create an unsettled feeling among the younger men, tending to retard their advancement. This uneasiness, it is believed, can be removed by the enactment of the law which was recommended in the last annual report of this office, providing for the permanent location of the Poncas by the purchase from the Cherokees of the land embraced in the reservation on which they are now located, and for the appropriation of a sum sufficient to indemnify the tribe for the lands and property heretofore owned by them in Dakota.

The Poncas are anxious to have their matters definitely settled, and to this end, under date of the 25th ultimo, the chiefs and headmen forwarded a petition, as follows:

We, the undersigned, chiefs and headmen of the Ponca tribe of Indians, realize the importance of settling all our business with the government. Our young men are un-

settled and hard to control while they think we have a right to our land in Dakota, and our tribe will not be finally settled until we have a title to our present reservation and we have relinquished all right to our Dakota land. And we earnestly request that the chiefs of the Ponca tribe of Indians be permitted to visit Washington the coming winter, for the purpose of signing away our right to all land in Dakota and to obtain a title to our present reservation; and we also wish to settle our Sioux troubles at the same time. We make the above request, as we desire to have the young men of our tribe become settled and commence to work on their respective claims.

We also desire to make this visit in order to convince the government that it is our intention of remaining where we are, and requesting the aid of the government in obtaining teams, wagons, harness, tools, &c., with which to work our land.

Yours respectfully,

<sup>his</sup>  
WHITE X EAGLE.

<sup>mark.</sup>  
<sup>his</sup>  
BLACK X CROW.

<sup>mark.</sup>  
<sup>his</sup>  
FRANK X LA FLESCHÉ.

<sup>mark.</sup>  
<sup>his</sup>  
BIG X SOLDIER.

<sup>mark.</sup>  
<sup>his</sup>  
CHILD X CHIEF.

<sup>mark.</sup>  
<sup>his</sup>  
THE X CHIEF.

<sup>mark.</sup>  
<sup>his</sup>  
FOUR X BEARS.

<sup>mark.</sup>  
<sup>his</sup>  
YELLOW X BIRD.

<sup>mark.</sup>  
<sup>his</sup>  
WHITE X BUFFALO BULL.

<sup>mark.</sup>  
<sup>his</sup>  
WHITE X FEATHER.

<sup>his</sup>  
STANDING X BUFFALO.

<sup>mark.</sup>  
<sup>his</sup>  
LITTLE X PICKER.

<sup>mark.</sup>  
<sup>his</sup>  
RUSH IN X THE BOTTLE.

<sup>mark.</sup>  
<sup>his</sup>  
BIG X BULL.

<sup>mark.</sup>  
<sup>his</sup>  
SHORT X MAN.

<sup>mark.</sup>  
<sup>his</sup>  
RED X LEAF.

<sup>mark.</sup>  
<sup>his</sup>  
BUFFALO X RIB.

<sup>mark.</sup>  
<sup>his</sup>  
PETER X PRIMEAUX.

<sup>mark.</sup>  
<sup>his</sup>  
BIG X GOOSE.

<sup>mark.</sup>  
<sup>his</sup>  
WALKING X SKY.

We, the undersigned, certify on honor that we were present and witnessed the signing of the above by each of the individuals named, and that the above was written at the solicitation of the Ponca chiefs.

JOSEPH ESAW, *Interpreter.*  
A. R. SATTERTHWAITE.

PONCA AGENCY, I. T., October 25, 1880.

#### QUAPAWS.

This tribe, numbering about 200, has a reservation in the northeast corner of the Indian Territory, consisting of 56,685 acres, about three-fourths of which are said to be good tillable lands, the remainder being timbered and well adapted to grazing purposes. The location of these Indians so near the border, and close to Baxter Springs, has proved somewhat dangerous to the interests of the tribe. In spite of the safeguards thrown around them, they could at all times easily procure intoxicating liquors, through the agency of worthless whites, and a large proportion of the tribe formed habits of dissipation, became indolent, and made but very little progress in civilized pursuits. To escape these evils, the principal chief and at least half of the tribe, in 1876, removed to the Osage Agency, and have been joined since by nearly all the members of the tribe, there being at the present time only 35 of their number at the agency. They have intermarried with the Osages, speak the same language, and properly belong with them. The agent of the Osages reports that those at his agency seem cheerful and contented, and have no idea of returning to their own reservation; that they are anxious to

work, and during the past year have made quite an effort to raise something to subsist upon. The tribe take much interest in the education of their children, and those who have had school privileges for the past few years have made commendable improvement. Encouraged in these praiseworthy efforts, these children may, in a few years, become useful and efficient educators of their tribe and exemplary members of society.

#### SAC AND FOX INDIANS OF IOWA.

These Indians are located in Tama County, Iowa, on the line of the Chicago and Northwestern Railroad, and number in all about 355. They belong to the Sac and Fox of the Mississippi, and formerly resided with that tribe upon a reservation in Kansas. At the time of the allotment of lands in severalty to the members of the tribe, under their treaty of 1859, some of them, headed by the Chief Maw-mew-wah-ne-kah, were bitterly opposed to receiving lands in severalty and refused to be enrolled for that purpose, and it was charged that this chief used his influence to impede and prevent the execution of the treaty. For this contumacious conduct he was deposed from his chieftainship, and thereupon, with some five or six lodges who were induced to follow him, he left his people in Kansas and returned to Iowa, where he was subsequently joined by other members of the tribe and by straggling Pottawatomies and Winnebagoes. From the time they left Kansas up to 1867 they received no aid from the government, but lived by cultivating small patches of land in summer, wherever they could get the privilege of doing so, trapping in winter, and begging when there was a necessity.

In 1866, attention was called to their destitute condition, and a special agent was appointed by order of the department to make a payment to them of a share of their annuities. The loyal members of the tribe, however, protested against this order, and it was thereupon revoked; but at the next session of Congress the following provision was made for their benefit in the Indian appropriation bill: "That the band of Sacs and Foxes, of the Mississippi, now in Tama County, Iowa, shall be paid pro rata according to their numbers, of the annuities, so long as they are peaceful and have the assent of the government of Iowa to reside in that State." That assent had been granted by an act of the Iowa legislature, approved June 15, 1856. Under said act of Congress, a special agent was appointed to attend to the band and pay them their annuities, and at their request \$2,000 of their first annuity money was used to purchase a tract of 99 acres of land. Since then additional purchases of land have been made from time to time for their benefit from private citizens, amounting in the aggregate to nearly 700 acres, and at a cost of \$14,000. These lands are taxed by the State, and are held in trust by the governor of Iowa and the agent for the common use and benefit of the Indians.

For nearly four years past they have refused to receive their annuities, owing to an objection which they have to signing a new form of payroll. Formerly only the heads of families were entered upon the payrolls, and the number of children was given without specifying names, ages, &c. The new form requires each family to be entered separately, commencing with the head of the same and followed by the names and a brief description of all the persons for whom he or she is entitled to draw the per capita payment. Thus far no inducement or argument has prevailed to change the determination of the Sac and Fox not to sign these rolls, as they believe a compliance with the requirement conflicts with their religious opinions. They complain that they have not received



their full share of the tribal annuities under the provisions of the 21st article of the treaty of 1868. While this is not conceded, yet it cannot be definitely determined, because of the imperfect census of this branch of the tribe, the last payment to them being made upon the same basis as the first (in 1867). The whole difficulty in this lies in their perverseness and objection to being enrolled and to the taking of a proper and accurate census, which would be accomplished by their allowing their names to be placed upon the new form of pay-roll before referred to. Until they shall assent to such a course, any fancied or real claim they may have against the main branch of the tribe for an unequal division of funds under the treaty cannot be adjusted.

They are averse to schools and prefer to instruct their children in their own language, and have made some progress by that system of education. They are industrious, peaceable, and temperate in their habits, and in addition to their real estate have accumulated personal property to the amount of about \$20,000.

#### MO-KO-HO-KO BAND OF SAC AND FOX INDIANS.

These Indians belong to the Sac and Fox tribe of the Mississippi, but under the influence of their chief, Mo-ko-ho-ko, who died two years ago, have persistently refused to remove from Kansas to the reservation of the tribe in the Indian Territory. By the favor shown their brethren in Iowa they have been induced to believe that, if they would persist in their refusal to unite with their tribe, they would eventually have lands assigned them where they now are, in Osage County, Kansas, and obtain their share of the Sac and Fox annuity fund, by having it set apart for them.

In 1874 their brethren in the Indian Territory generously consented to defray the expenses, amounting to \$1,000, of sending a delegation of this band to this city, with the distinct understanding that they would make immediate preparations thereafter to remove to the Indian Territory. Accordingly, in December, 1875, they were removed, but very soon returned to Kansas, "living vagabond lives and intruders on lands of citizens there," dependent at times upon the charities of white settlers, their children growing up in ignorance, and the whole band demoralized by the evil influences resulting from the whisky traffic. Ample provision is made for them under the provisions of their treaty of 1868, by which they can have all the lands on their reservation in the Indian Territory that they desire to cultivate, can have their children educated, and can also share in the annuities of the tribe.

Frequent complaints have been made to the office by citizens of Kansas on account of the intrusions of this band, and in August last United States Agent Linn, of the Pottawatomie Agency, was directed to make an investigation of matters complained of. He reports that there are 175 in all belonging to the band; that they are living upon the lands of settlers, but persist in claiming these lands as their own, and that they do not acknowledge the treaty under which it is claimed that the lands have been sold, and will not leave. After representing to them the numerous advantages they would realize by complying with their agreement to remove, they informed him emphatically that they would not remove to the Indian Territory.

#### CHIPPEWAS OF MINNESOTA.

For the Chippewas of Minnesota three reservations have been set apart—the White Earth Reserve, containing 36 square miles of the best

farming land in Minnesota, with abundance of wood and water; the Red Lake Reserve, where the arable land is limited in quantity but sufficient for the needs of the tribe, and of good quality; and the Leech Lake Reserve, where there are only a few patches of land scattered along the shores of the lake and accessible only by canoe, on which fair crops of corn and potatoes can be raised. The rest is covered with pine timber, and for agriculture would not be worth the heavy expense of clearing it.

The three thousand Indians at White Earth and Red Lake are practically self-supporting, having harvested this year 39,000 bushels of wheat, 13,000 bushels of corn, and 22,000 bushels of potatoes. Nearly all at White Earth wear citizen's dress, live in houses, send their children to school, attend church on the Sabbath, and lead a quiet, industrious, agricultural life. Many have surrounded themselves with the comforts of civilized life, and a casual observer would notice but little difference between their settlement and the white farming communities of the frontier.

For many years the Red Lake Indians have managed to take care of themselves, supplementing the fish and small game of the reserve with moderate but never failing crops of corn, and some potatoes. For several years past their garden patches have been enlarged each year; some property, in the way of stock cattle and implements, has been accumulated, and wheat-raising has been successfully introduced. One after another they are renouncing wigwams for log-houses, built by their own hands; and, with very small expenditures of money, are slowly and steadily advancing to that degree of civilization which the White Earth Indians reached in a few years, by means of liberal appropriations from Congress and generous contributions from missionary societies. The Red Lake Reserve is remote from settlements, is suited to all the wants of the Indians there, and, on the whole, is as good a home as could be found for them, and one to which they are devotedly attached.

The only hope for the Pillager Chippewas at Leech Lake lies in their removal to White Earth; and though such removal a few years ago would have met with determined opposition, it is believed that many are now beginning to realize the hopelessness of the situation at Leech Lake, and the advantages which the White Earth Reservation offers. Without doubt if a yoke of cattle, or a house, or some other assistance in the way of getting established at a new place could be offered them, many families would be ready to remove thither at once. A gradual removal of this sort would be more advantageous and economical than to undertake to transplant the whole tribe at one time. But without some appropriation from Congress for the purchase of cattle, building of houses, furnishing seed, implements, &c., for the first season, nothing in this direction can be attempted with any hope of success.

At White Oak Point and vicinity, and at Mille Lac and Snake River are 770, 525, and 250 Chippewas, respectively. The White Oak Point Chippewas have a barren, worthless reserve on which they cannot live. The Mille Lacs are on a fine tract of land, which can never be their own (their only title to it being the privilege of occupancy during good behavior) and which is coveted and trespassed on by the whites. The branch of the Mille Lacs at Snake River are on small tracts of land purchased by themselves at government rates, in the neighborhood of Brunswick, Minn., near the Northern Pacific Railroad. All of these Indians are in close contact with whites, have free access to liquor, and are grafting on to barbarism all the degradation of which civilization is capable. Wretched, poverty-stricken, drunken, debauched, and diseased, it might almost be

questioned whether they are not even now beyond hope. But the interests of the white communities in their vicinity would require that some determined effort be made for the reclamation of these Indians, even though they had themselves forfeited all claims to humane treatment from a government which committed the blunder, if not the crime, of relegating them to a reservation or leaving them in a position in which a white man would become a savage. The settlements and lumber camps must be relieved of the demoralizing presence of those whom they have demoralized, and it becomes the imperative duty of the government to give these Indians a new home where they will be out of the way of the whites, and where they will have an opportunity for and encouragement in a better mode of living. Fortunately there is no question as to the place to which they should be removed, the White Earth Reservation being ample, both in size and resources, to accommodate all the Indians in Minnesota. The best methods and means to be used to induce the Indians to remove would be a subject for future consideration the immediate necessity being an appropriation to defray the expenses of the removal and to assist the Indians in opening farms, putting up houses, &c. I would recommend that, at its next session, the attention of Congress be called to the urgency of this matter. The sum required to remove and settle these Indians is far less than the waste and loss which is the inevitable outcome of pauperism and vagrancy.

#### CROW RESERVATION, MONTANA.

Simultaneously with the negotiations with the delegation representing the Shoshone, Bannock, and Sheepeater tribe, already referred to, an agreement was entered into with certain chiefs of the Crow Indians, subject to the consent of the adult male members of the tribe. It provided for the cession to the United States of a portion of the Crow Reservation in Montana Territory, being a strip along the southern boundary thereof, about eighteen miles wide, between the 109th and 110th meridian, and also that portion of the reservation west of the 110th meridian—containing in all about 1,668,000 acres. By the agreement the remaining lands of the reservation are to be surveyed and allotted in severalty to the said Indians in the proportions mentioned in the agreement, and patents, with restrictive clauses against alienation, &c., are to be issued therefor, so soon as the necessary laws are passed by Congress. In consideration of such cession of territory, the United States, in addition to the annuities and sums for provisions and clothing provided for in existing treaties and laws, agrees to appropriate annually for twenty-five years, the sum of \$30,000, to be expended under direction of the President, for the benefit of the said Indians, in assisting them to erect houses, to procure seeds, farming implements, and stock, or to be paid them in cash, as the President may direct.

This agreement was submitted by the agent to the Indians in council assembled at the Crow Agency on the 12th of June last, and was confirmed by a majority of the tribe, with the following modifications, viz: Taking for the western boundary of the lands agreed to be ceded, in place of the 109th meridian, a line about ten miles west of the same, reducing the area of the cession about 115,200 acres.

The portion of the Crow Reservation agreed to be ceded is that which has been represented as chiefly valuable for its mineral resources, and whose occupation has long been desired by the whites. It is believed that the agreement as it now stands will fully answer the requirements of the people of Montana; the strip of land which the Crows refused to sell

not being considered of any special advantage to the whites, if, indeed, it is of any particular value to the Indians.

In anticipation of the confirmation by the Indians of the agreement, as originally framed, bills (H. R. 6227 and S. 1760) to accept and ratify the same and to make the necessary appropriations were prepared in this office, and introduced in both Houses of Congress at the last session. The change of boundaries will now necessitate a new bill, which will be duly prepared and submitted to the department at the opening of the next Congress.

#### GREAT NEMAHA AGENCY, NEBRASKA.

This agency is composed of two small tribes, the Iowas, and Sac and Fox of the Missouri, occupying contiguous reservations in Northeastern Kansas and Southeastern Nebraska, containing about 2,200 acres of excellent farming and grazing lands.

##### *Iowas.*

The Iowas now at the agency number 171, over 30 having within the last two years emigrated to the Indian Territory. They are an industrious, agricultural people, and have made a marked improvement within the past few years. Nearly all have farms or fields well fenced, ranging from 10 to 160 acres each, and many of their houses will compare favorably with those of the white settlers around them, being furnished in a similar manner, and some of them carpeted with carpets of their own manufacture. Almost every house has its flourishing orchard of various kinds of fruit trees, and they not only imitate the whites in their dress, their manner of living, and in cultivating and ornamenting their grounds, but many of them surpass some of their white neighbors in industrial pursuits. This year they have raised, in addition to corn and other crops, over 2,700 bushels of wheat, more than 16 bushels to every man, woman, and child. They are self-sustaining, and take quite an interest in the education of their children. Eighty acres of land are cultivated in connection with their industrial school, which have yielded a sufficient supply of grain, vegetables, &c., for the subsistence of the school.

The members of the tribe now absent in the Indian Territory are there without leave or authority, and will receive none of the benefits resulting from treaty stipulations until they comply fully with the requirements of the department and return to their agency, as provided by section 3 of the act approved March 3, 1875.

This tribe will in a short time be capable of managing their own affairs without the immediate supervision or oversight of an agent. Most of them desire an allotment of their lands in severalty, and this should be done under proper restrictions, as early as possible, and the way prepared to extend to them the rights, privileges, and protection of American citizenship.

##### *Sac and Fox of the Missouri.*

This tribe numbers 75, and having made no marked progress for years past, their condition is very different from that of their neighbors, the Iowas. Their cash annuity payment is a great obstacle to their advancement. So long as they are furnished with funds to meet their current expenses they will not be inclined to devote much of their time to manual labor, or, if they do, it will be merely sufficient to exempt them from the restrictions of the act prohibiting the payment of annuities, "except to

those who perform labor equal in value to the annuity paid them." Another cause of their slow progress may be attributed to a diversity of sentiment among them in regard to their removal to the Indian Territory. This question has been agitated by many members of the tribe for several years past, creating a restless and unsettled state of feeling among them, and twelve of their number within the past two years have left the agency and joined their friends on the Sac and Fox Reservation in the Indian Territory. Under the provisions of section 3 of the act approved March 3, 1875, no annuities will be paid them until they return to their own reservation, settle down with their brethren there and perform the service required by said act.

#### OTOES AND MISSOURIAS.

The Indians of this agency comprise the confederated tribe of Otoes and Missourias, numbering in all 434. Their reservation, containing 43,000 acres, is located in the valley of the Big Blue River, on the State line between Kansas and Nebraska, and is said to be one of the finest tracts of land for agricultural purposes west of the Missouri River; yet as a tribe these Indians have not improved their advantages, but have been slow to give up their old habits and customs, and to undertake self-support by the cultivation of the soil. A large number of the tribe have been anxious for the past three or four years to remove to the Indian Territory, where they can have better access to game and can enjoy the hospitality of other tribes. The constant agitation of this subject among themselves and also among the neighboring white settlers, who have advised their removal primarily with the object of obtaining possession of their lands, has been the most formidable obstacle to their improvement. An inspector was sent to the agency in April last, who made a thorough investigation of its affairs. Some of the Indians, about 160 in number, impressed with the belief that he would favor their removal, ran away, and are now at the Sac and Fox Reservation in the Indian Territory. About 30 others, at different times, had preceded this party. All have been notified that their annuities will be issued to them only at their regular agency.

Only seven Indian families occupy dwellings. They farm tracts of from 10 to 100 acres, and the whole amount of land under the care of individual Indians, the present year, will not exceed 400 acres, from which they have raised 800 bushels of wheat, and a fair amount of other products. The agency farm, cultivated to a great extent by Indian labor, has yielded this year 2,261 bushels of wheat, 249 bushels of oats, and a large amount of rye, vegetables, &c.

The changes in the local management of the tribe, which have been made on the recommendation of the inspector, have been productive of good results, and it is believed that when the Indians fully understand that they are to occupy their reservation as a permanent home, they will make more rapid improvement. The agent reports that their boarding-school during the past year has been poorly patronized, owing, no doubt, to causes already referred to; yet their capacity for development is said to be good, as some of their children, taken from the rude wigwam to the school, have learned to read and speak English in the short space of six months.

The moral condition of the tribe is in very many respects in advance of many other tribes. There are no squaw-men among them, and the agent states that in virtue and chastity they stand without comparison; that there is not a known case of illegitimacy, and that "pro-



fane language is never heard, unless among those who have learned the white men's way."

MESCALERO AGENCY.

The results of the efforts made during the past year to promote the interests and civilization of the Indians of this agency are not of a very gratifying character. In the last annual report of this office a brief statement was made in regard to the arrival of Victoria and a portion of his band upon the Mescalero Reservation, the desire expressed by him to remain there permanently, and the causes which very soon thereafter induced him suddenly to leave. He had persuaded some of the Mescaleros to join him, and within a few days after his departure was marauding and murdering citizens a hundred miles distant from the reservation. Some of his people, for two or three months during the latter part of last winter and in early spring, were in the mountains less than forty miles distant from the agency, having constant intercourse with the Indians of the reservation, and being successful in evading the military. Nearly two hundred and fifty, regarded as the worst Indians of the agency, were induced to join that chief. Nearly all those who remained were subject to the influence and control of the principal chief of the tribe, Nautzillas, who is regarded as an exemplary Indian and a true friend of the government. The remarkable success of Chief Victoria and his followers in skirmishes with the army during the past season and in evading pursuit, and the depredations and murders committed by them, are well known, and a matter of history. Closely and steadily pursued by the military, their numbers constantly diminishing, they were at last driven by General Buell's forces into Mexico, and the work which that officer had nearly consummated was completed by Mexican troops under General Terrasas; Victoria and nearly all of his followers being destroyed by the command of that officer.

In January last, soon after active operations were commenced by the military against Victoria, General Pope deemed it best to cut off all communication between that chief and the Mescalero Indians on the reservation, and recommended the disarming and dismounting of these Indians, and that sufficient supplies be furnished them to obviate any necessity of their hunting for game, and that they be properly guarded. The manner in which this was done has been the subject of correspondence with the War Department.

As Victoria is now disposed of, it is important that a permanent location be selected for these Indians, and other Mescaleros and Southern Apaches, in charge of the military, or who may hereafter make their appearance upon the reservation. There are no buildings at the agency fit to be used for agency purposes, and new ones are immediately required for the protection of the public property, and to shelter the agent and employés if the agency is to be continued.

A short time prior to Victoria's outbreak measures had been taken to place the Southern Apache Indians upon their old reservation, the "Hot Springs reserve," west of Mescalero, and to this end, on the 19th of September, 1879, the office recommended a revocation of the order of August, 1877, for the sale of the buildings and restoration of the lands to the public domain; but owing to said outbreak, action upon this recommendation was suspended. The public buildings upon that reservation are said to be in excellent condition, and valued at \$20,000, and there are lands of good quality sufficient to supply all the Southern Apaches, and double the number of Indians at Mescalero. If placed on that reservation it will be very difficult for them to enter Texas or Mexico

upon raids, should they be so disposed, without passing in the vicinity of one of the military posts situated in Southern New Mexico. I therefore recommend the advisability of considering the question of the removal of the Mescalero Indians to the Hot Springs Reservation, and that a council be held with representative members of the tribe, with the view of obtaining their consent to the proposed change.

#### MALHEUR AGENCY.

The Malheur Reservation, in Southeastern Oregon, contains 1,778,560 acres of land. The agency is located in the extreme northeastern corner of the reservation, where all the best agricultural lands are situated.

In 1878, for the purpose of aiding the bands on this reserve and other roving Indians in Southeastern Oregon, Congress appropriated the sum of \$10,000, and each year since an appropriation of \$5,000 has been made for the same object. Under the direction of this office, Agent Rinehart, in charge of the Malheur Agency, assisted by a special agent appointed for the purpose in 1878, attempted to gather the roving bands together at Malheur, but they only succeeded in removing about 130, consisting mainly of Weiser's band. All of the 600 Indians belonging to the agency left there upon the outbreak of the Bannack war, in June, 1878. At the close of the war those who had taken part in the hostilities, together with 100 other Pi-Utes who belonged at Malheur, were removed with their women and children to the Yakama agency. There then remained about 230 Indians, under Chiefs Ocholo, Winnemucca, and Weiser, who properly belonged at Malheur.

In January last a self-constituted delegation, consisting of the chief, Winnemucca, and other members of his band, visited this city, and while here made an agreement to remove to Malheur, and receive allotments of land at the rate of 160 acres to each head of a family and each adult male; they were to cultivate these allotments for their own benefit, and, as soon as enabled by law to do so, they were to receive patents for such tracts of land conveying to each occupant the fee-simple title to the same. In pursuance of this agreement supplies were sent to the agency for their subsistence, and the agent was directed to take the necessary steps to gather the Indians there; but so far he has been unable to induce them to remove. They remain in the vicinity of Camps McDermott and Bidwell, and the town of Winnemucca, and support themselves mainly by cultivating lands and laboring for wages among the whites. It has not been deemed advisable to use coercive measures to place them upon their reservation; but inasmuch as they are peaceable and industrious, they have been left to engage in civilized pursuits among the whites and thereby acquire habits of industry, by which they will be enabled to support themselves. Agent Wilbur, at Yakama, reports that their kindred and friends at his agency are contented, and have made marked improvement; that they manifest great interest in his plans for their welfare, and that their children are making rapid progress in school.

It is believed that the best interests of the service in Southern Oregon require a discontinuance of the Malheur Agency, and the appraisal and sale of the lands included in the reserve, the proceeds of the sale to be invested for the benefit of the Indians. In compliance with the directions of the department, Special United States Agent A. R. Smith was instructed, on the 22d ultimo, to proceed to the agency and make a thorough investigation of its affairs, and of the condition and disposition of the straggling bands of Indians referred to. On the re-

ceipt of his report the office will be prepared to make such additional recommendation as the facts may justify.

#### YAKAMA AGENCY.

This agency presents a good illustration of the practical results of the peace policy. It has been in charge of Agent James H. Wilbur for the past fifteen years, and under his good business management the Indians have each year shown a steady and most gratifying advance in civilization. The Indians at this agency, including the Pi-Utes and Bannacks, already referred to, number about thirty-nine hundred.

All of these Indians are on their reservation, situated in the southern part of Washington Territory, and are extensively engaged in agriculture and stock-raising. The agent reports an increasing desire among them to learn and practice the arts of civilized life; to accumulate property; to increase the area of cultivated land, and to acquire cattle, comfortable houses, and other adjuncts of civilization. They own four mowing-machines, four combined reapers and mowers, and about one hundred plows, besides harness, wagons, and other agricultural implements. They also own thirty sewing-machines, which are operated by the Indian women. Thirty-three hundred wear citizens' dress.

Two hundred and eighty houses are now occupied by Indians; 37 new houses have been built this year, and 400,000 feet of lumber sawed with which to continue the work. They have also erected and handsomely finished a church, capable of seating 700 people, besides assisting in building 12 good farm-houses on different parts of the reservation, which the agent states would be considered "first class" in any country.

Eight thousand acres of land are under cultivation, and there have been raised this year 35,000 bushels of wheat, 3,200 bushels of oats and barley, and 5,000 bushels of vegetables; 1,000 tons of hay have been cut. These Indians have a large number of horses, mules, and cattle, and take good care of them.

Two schools are in successful operation with an average attendance of 80 pupils.

Less than 10 per cent. of the wants of these Indians is supplied by the government, and if the present policy be continued the time is not far distant when the problem of their civilization will be solved.

#### HOSTILE INDIANS UNDER SITTING BULL.

Early in May last information was communicated to the department by agents in Montana that there was a disposition on the part of a large number of hostile Indians under Sitting Bull to surrender, and instructions were given to all the agents in charge of agencies at which these Indians would be likely to make their appearance, to comply strictly with an order of the President, of the 25th of June last, to "hold out no inducements to them," but "if they come in and surrender their arms and ponies, and submit as prisoners of war, it must be without conditions." Since then over 1,000 of these Indians have surrendered. About 1,000 are at Fort Keogh, where they will remain until provided for permanently, and others are at agencies to which they formerly belonged. The office also has advices from military sources, that on the 13th of October over two hundred lodges of hostiles were camped some forty miles distant from the Fort Peck Agency, who would soon proceed to Fort Keogh, and that Sitting Bull was then moving towards Milk River, and it was believed that he would soon surrender.

## EXPIRATION OF TREATY PROVISIONS WITH INDIANS IN WASHINGTON TERRITORY AND OREGON.

The treaty provisions with the following tribes of Indians in Oregon and Washington, providing for annuities for a limited number of years, on account of lands ceded to the government in 1855, expired with the fiscal year ending June 30, 1880, viz: "Confederated tribes and bands" and the Walla Walla, Cayuse, and Umatilla tribes, in Oregon, and the D'Wamish and other allied tribes, Makahs, Quinaielts, Quillehutes, S'Klallams, and Yakamas, in Washington Territory.

Under the treaties with these Indians, appropriations have been made annually for their benefit, for the support of schools; for salaries and subsistence of teachers, mechanics, and laborers; for the purchase of agricultural implements, tools, and medicines, and books, &c., for schools; and for repairs of shops, mills, hospitals, agency buildings, &c.

The present condition of these Indians renders it very important that the aid and assistance heretofore extended be continued, and that early steps be taken for their permanent settlement upon lands in severalty, and for the sale of so much of their respective reservations as may not be required by them. Many of these tribes have made commendable progress in civilized pursuits in the past few years, and there is an uneasy feeling, and great anxiety on the part of many of their leading men to know what the future policy of the government will be toward them. The discontinuance of the appropriations for the support of their schools, and for other necessary objects, will prove very detrimental to their interests, and it is respectfully recommended that measures be taken to negotiate with the said tribes, with the view of extending to them such additional benefits as their present condition demands.

## PURCHASE OF SUPPLIES FOR THE INDIAN SERVICE.

The business of annually purchasing supplies, goods, &c., for the Indian service is one of great magnitude. The multiplicity of articles required to meet the varied wants and necessities of the Indians, situated as they are in localities widely separated, cannot be better demonstrated than by the statement that nearly two thousand different articles are embraced in the list of purchases. At the annual letting of contracts for the current fiscal year two hundred and seventy-nine proposals were received for furnishing the goods required by the department, more than ninety-seven per centum of which were accompanied by proper certified checks for five per centum of the amount of bid in each case, as required by the act of March 3, 1875, and the rules of the department. One hundred and twenty-nine contracts (in quadruplicate) were executed, and proper bonds furnished for the faithful performance of the same. The contracts were awarded by the Commissioner, with the advice of the Board of Indian Commissioners, after examination of the samples offered by the respective bidders, by competent inspectors or experts appointed for the purpose.

The work of receiving, inspecting, and shipping contract supplies is attended with much detail. Each package, when delivered at the government warehouse, is weighed, and if found correct the invoice which accompanies the same is properly "checked." If, however, a discrepancy exists the same is noted on the said invoice, and the necessary correction made on the package itself. Then commences the work of inspection by the expert, by a comparison of the quality of the goods delivered with the sample upon which the contract was awarded, and

of the number of pounds, yards, or other quantity, with the amount noted on the hereinbefore-mentioned invoice. Shipments are made in a systematic manner, each package being subject to the same scrutiny on leaving the warehouse that it received upon its entry therein. A complete and comprehensive record is kept of the goods received and shipped, so that the office has at all times at its command the necessary data by which it is enabled to tell the state of its business in that regard, or to trace any package that may have gone astray. As an evidence of the completeness of the system of receiving and shipping goods, and of the record kept thereof, as well as of the magnitude of the business connected therewith, I deem it only necessary to state that not one package (and they varied from one ounce to five hundred pounds in weight) is unaccounted for of the twenty-six thousand eight hundred and sixty-one received, whose total weight aggregated four million four hundred and eighty-two thousand eight hundred and seventy-four pounds.

It is gratifying to state that less difficulty has been experienced this year, in the matter of deliveries of goods, &c., by contractors, than in any former year. But few attempts have been made to force upon the department supplies inferior to those contracted for, which fact is, in my opinion, entirely due to the rigid inspection to which all goods are subjected, and the well-known policy of rejecting all that do not conform to contract requirements.

I have the honor to be, sir, very respectfully, your obedient servant,  
E. M. MARBLE,  
*Acting Commissioner.*

The Hon. SECRETARY OF THE INTERIOR.

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## REPORT OF THE COMMISSIONER OF THE GENERAL LAND OFFICE.

DEPARTMENT OF THE INTERIOR,  
GENERAL LAND OFFICE,  
October 18, 1880.

SIR: With reference to the business transacted by this office during the fiscal year ending with the 30th June, 1880, under the laws for the survey and the disposal of the public lands of the United States, I have the honor to report that there were surveyed during that period an aggregate area of 15,699,253 acres of public lands, besides 652,151.37 acres embraced in private land claims, showing an increase in the former of 7,253,471 acres over the previous fiscal year. The total area of public lands surveyed from the beginning of operations up to the close of the last fiscal year is 752,557,195 acres, leaving as the estimated area of the public domain yet unsurveyed, 1,062,231,727 acres. The great increase observable in the surveys of public lands during the fiscal year is attributed to the operation of the act of March 3, 1879, amendatory of section 2403 of the United States Revised Statutes, which admits of surveys being made on deposits by individuals of the estimated costs, and makes the certificates issued on such deposits assignable by the depositors and receivable from settlers in payment for public lands.

The disposals of public lands during the fiscal year ending June 30, 1880, amount to 14,792,371.65 acres, being an increase of 5,458,988.36



acres over the previous fiscal year. This aggregate of disposals is made up as follows, viz:

	Acres.
Cash entries.....	850,740.63
Being an increase of 228,166.67 acres as compared with the previous fiscal year. In the above total of 850,740.63 acres is included the amount of 155,639.35 acres, entered under the desert land act of March 3, 1877.	
Homestead entries.....	6,045,570.60
Being an increase of 785,459.31 acres over the previous fiscal year.	
Timber culture entries.....	2,193,184.12
Being a decrease of 573,389.81 acres as compared with the previous fiscal year.	
Agricultural college scrip locations.....	1,280.00
Being an increase of 320 acres over the previous fiscal year.	
Locations with military bounty land warrants, under acts of 1847, 1850, 1852, and 1855.....	88,522.00
Being an increase of 37,702 acres over the previous fiscal year.	
<i>State selections approved:</i>	
For school indemnity.....	206,089.06
For internal improvements.....	223,140.80
For agricultural colleges.....	2,360.46
For public buildings.....	3,599.67
	435,189.99
Being an increase of 248,798.26 acres over the previous fiscal year.	
<i>Scrip locations:</i>	
With Sioux half breed scrip.....	4,151.48
With Chippewa half breed scrip.....	3,040.00
With Valentine scrip.....	1,720.00
With Cole's scrip.....	1,514.27
With Choctaw scrip.....	480.00
	10,905.75
Being an increase of 6,249 acres over the previous fiscal year.	
Locations of certificates issued under the acts of June 2, 1858, and June 22, 1860, in lieu of lands embraced in private claims, but not taken in place.....	195,516.92
Being an increase of 107,943.48 acres over the previous fiscal year.	
	9,820,910.01
Donation claims in Oregon and Territories of Washington and New Mexico, for which certificates have issued, under acts of 1850, 1853, and 1854.....	36,552.50
Entered under settler's relief act of March 3, 1875.....	160.00
	9,857,622.51
Lands patented to States as swamp, under act of September 28, 1850, or approved as such to Louisiana, under the act of March 2, 1849, which has the effect of a patent.....	3,757,888.99
Being an increase over the amount patented during the previous fiscal year of 3,682,500.91 acres.	
	13,615,511.50
Lands certified for railroad purposes.....	1,157,375.01
Being an increase over the previous fiscal year of 879,040.90 acres.	
Lands certified for wagon road purposes.....	19,485.14
	1,176,860.15
Total number of acres disposed of for the fiscal year, being an increase of 5,458,988.36 acres over the previous fiscal year.....	14,792,371.65

The aggregate of moneys received during the fiscal year ending June 30, 1880, is \$2,290,161.60. This amount exceeds by \$407,048.04 the amount received during the previous fiscal year, and is made up as follows, viz:

Purchase money of lands sold .....	\$1,255,583 90
Homestead fees and commissions .....	657,215 18
Timber culture fees and commissions .....	196,887 00
Fees on donation certificates .....	1,805 00
Fees on pre-emption filings .....	62,965 00
Fees on homestead filings .....	6,588 00
Fees on mineral applications and protests .....	21,460 00
Fees on coal filings .....	362 00
Fees on timber land entries .....	1,700 00
Fees on military bounty land warrant locations .....	2,134 50
Fees on agricultural college scrip locations .....	16 00
Fees on Valentine scrip locations .....	43 00
Fees on State selections .....	60 00
Fees on railroad selections .....	21,705 86
Fees on wagon road selections .....	1,711 00
Fees on reducing testimony to writing, or examining and approving testimony in homestead cases, by district land officers, and for transcripts furnished by them from their records .....	43,214 21
Fees for certified copies furnished by this office under section 461 Revised Statutes .....	7,043 05
Fees from miscellaneous sources .....	9,667 90
	<hr/>
	2,290,161 60

During the last fiscal year there were received at this office 90,076 letters, a greater number by 7,501 than were received during the previous fiscal year. During the same period the number of letters written, recorded, and sent out from this office was 62,115, an increase of 2,502 over the previous fiscal year.

#### SURVEYS.

An appropriation of \$300,000 for the survey of the public lands for the fiscal year ending June 30, 1880, was made by act of Congress approved March 3, 1879. This amount was apportioned by the department to the several surveying districts as follows:

To the district of—

Arizona .....	\$10,000 00
California .....	37,156 59
Colorado .....	35,000 00
Dakota .....	46,000 00
Idaho .....	13,000 00
Louisiana .....	14,000 00
Minnesota .....	20,000 00
Montana .....	14,000 00
Nebraska .....	20,000 00
Nevada .....	10,000 00
New Mexico .....	10,000 00
Oregon .....	20,000 00
Utah .....	12,000 00
Washington .....	18,000 00
Wyoming .....	12,000 00
	<hr/>
Amount apportioned for field work .....	291,156 59
Additional apportionment to sundry survey districts .....	8,843 41
	<hr/>
	300,000 00

By said act of Congress there was also appropriated for surveys of private land claims during the year—

In Arizona .....	\$15,000 00
In California .....	7,500 00
In New Mexico .....	10,000 00
	<hr/>

Making a total of..... 32,500 00

There was also appropriated for occasional examination of public surveys in the several surveying districts, &c., \$8,000; and for surveying Indian lands in Dakota \$10,000; making an aggregate of the appropriation of \$350,500.

Under the foregoing appropriations and apportionment, the surveyors general of the respective surveying districts have reported progress of the operations conducted by their deputies, the returns of which, as passed upon by this office, and certified to the First Comptroller of the Treasury for payment, amounted to 15,699,253 acres of public lands surveyed during the fiscal year ending June 30, 1880; 652,151.37 acres of private land claims, and 67,063.90 acres of Indian reservation for the Red Cloud and Spotted Tail bands of the Sioux Nation of Indians in Dakota Territory.

The extent of surveyed lands, in the districts severally considered, is as follows:

Land States and Territories.	Area in acres.	
	Public land.	Private land claims.
<b>SURVEYING DISTRICTS.</b>		
Arizona .....	308,521.21	149,258.89
California .....	8,792,630.10	58,708.11
Colorado .....	2,775,601.81	.....
Dakota* .....	2,130,808.59	.....
Idaho .....	225,637.24	.....
Louisiana .....	80,504.58	.....
Minnesota .....	296,253.46	.....
Montana .....	802,413.55	.....
Nebraska .....	709,179.33	.....
Nevada .....	928,694.07	.....
New Mexico .....	1,624,156.41	444,184.37
Oregon .....	1,052,221.85	.....
Utah .....	440,585.79	.....
Washington .....	847,595.29	.....
Wyoming .....	184,449.68	.....
<b>Totals .....</b>	<b>15,699,252.96</b>	<b>652,151.37</b>

\* 67,063.90 acres are embraced in the Red Cloud and Spotted Tail Indian reservations.

\* \* \* \* \*

#### *Survey of the Colorado and Utah boundary.*

At the date of preparation of the last annual report, returns had been received of the survey of 150 miles of the Colorado-Utah boundary north from the initial point, which is a corner common to Colorado, Utah, New Mexico, and Arizona. The boundary line is the 32d meridian west from Washington, and it extends from the 37th to the 41st parallel north latitude. The total distance, as determined by chaining, is 276 miles 60.64 chains. The northern extremity of this boundary intersects the south boundary of Wyoming at a point 262 miles 28.58 chains west of the corner common to Colorado, Wyoming, and Nebraska. The survey was completed July 19, 1879. Full returns in triplicate have been received by this office, and copies have been forwarded to the surveyors general of Colorado and Utah.

The character of the country traversed by the first 150 miles of the survey was described in the last report. That portion was rocky, rugged, and destitute of settlements worthy of the name; the remaining portion of the boundary was for the most part found to be more broken, more sparsely timbered, the mountains were found to be of greater ele-

vation, with slopes of greater inclination, which were at some points impassable. The expedition was subjected to unusual hardships on account of the scarcity at several points of water and grass.

The boundary being a meridian, it was traced by means of continued observations upon Polaris, corrections for alignment being made at intervals. The magnetic declination (east) was found to vary from  $13^{\circ} 45'$  at the commencement of the survey to  $16^{\circ} 45'$  at the termination of the first hundred miles, increasing and diminishing with marked irregularity within that distance. At the 139th mile the declination had again diminished to  $14^{\circ} 45'$ ; at 212 miles it is shown to be  $16^{\circ} 20'$ . From the 214th mile to the termination of the survey the deviations from  $16^{\circ} 30'$  are scarcely noticeable.

Portions of the line were found to be impassable, and were, as appears, of necessity unmarked. The greatest difficulties of this nature were encountered at the crossings of mountains in the vicinity of White and Green Rivers. The principal streams crossed by the line are the San Juan, near the initial point, the Dolores, near the 121st mile, White River, near the 210th, and Green River at the 247th mile.

Barometrical observations were taken at every established mile post. The indicated elevation of the initial point above sea level is 4,700 feet. The highest point on the southern portion of the boundary is at the 103d mile, where an elevation of 8,380 feet is indicated. At the 148th mile, near Grand River, the surface is shown to be as low as 4,040 feet. The great undulations of the surface continue until the 235th mile is reached; thence to the termination of the boundary line the surface, though cut by numerous deep cañons, is mainly at high elevations. The highest elevation of the boundary line, as shown by the records, is at the 273d mile, where 8,450 feet is indicated.

Several white sulphur springs are noted at a point about fifteen miles east of the crossing of the south branch of Cliff Creek.

\* \* \* \* \*

#### DISPOSALS OF PUBLIC LANDS.

The disposals of public lands reported during the fiscal year ending June 30, 1880, amount to 14,792,371.65 acres. This includes 850,740.63 acres of cash sales, in which area is also computed 155,639.35 acres of desert land entries under the act of March 3, 1877. Under the term cash sales are comprehended sales at ordinary private entry pursuant to section 2354; pre-emption cash sales, under section 2259 and commutations of homestead to cash entries, under section 2301 of the Revised Statutes of the United States, townsite sales, and other disposals for cash under special acts of Congress for the sale of abandoned military reservations, Indian reservations, &c.

#### *Pre-emptions.*

Under this head the work of this office embraces the administration of the laws granting to actual settlers, upon certain conditions, the preference right to purchase the tracts covered by their settlements, pursuant to sections 2257 to 2288, Revised Statutes; the disposal of public lands under the town-site laws (sections 2380 to 2394, Revised Statutes, and the act of March 3, 1874), and in pursuance of other enactments of a local or temporary character embodying the pre-emption principle. The following is a statement from the pre-emption division,

G, of work performed during the year ending June 30, 1880, in the execution of the laws above referred to:

Contested cases in the division undecided July 1, 1879 .....	1,145
Received during year ending June 30, 1880 .....	1,615
<b>Total</b> .....	<b>2,760</b>
Decided during year .....	1,721
Finally referred .....	61
	<hr/> 1,782
<b>Total in division undecided June 30, 1880</b> .....	<b>978</b>

During the year there have been finally closed on the dockets, either by failure to appeal or by decision of the appellate authority, 1,345 contests.

<i>Ex-parte</i> entries in division July 1, 1879 .....	3,437
<i>Ex-parte</i> entries received during the year .....	5,745
<b>Total</b> .....	<b>9,182</b>
Approved during the year .....	4,591
Referred to other divisions .....	292
	<hr/> 4,883
<b>Total disposed of</b> .....	<b>4,883</b>
<b>Total in the division June 30, 1880:</b>	
Suspended .....	504
Not acted upon .....	3,705
<b>Total</b> .....	<b>4,209</b>

During the year ending June 30, 1880, there were received 6,147 letters; of these 92 remain unanswered.

Number of letters written by the division .....	7,327
Number of pages recorded by the division .....	6,142
Number of pages copied by the division .....	4,521

This statement shows a marked increase over the amount of the work performed during the year ending June 30, 1879, the number of cases disposed of both *ex-parte* and contested being larger, and of the contested cases only 978 remaining undecided, as against 1,145 undecided at the end of the preceding year.

In the matter of *ex-parte* entries, while the number of cases disposed of has been greater than the preceding year the number undisposed of is also greater, a fact due to the large increase in the number of entries received.

A large increase in the number of letters written and pages recorded and copied is also shown.

In pursuance of the provisions of the act approved March 3, 1877, "respecting the limits of reservations for town sites upon the public domain," lands within the incorporated limits of the following cities and towns in Utah in excess of the quantity to which they were entitled under said act, have been, during the past year, restored to homestead and pre-emption entry, viz: Richmond City, Springtown, Fairview, Moroni City, Ogden, Spanish Fork City, Provo City, Lehi, and Alpine City. And under instructions issued to the local officers at Salt Lake City, January 30, 1880, proceedings have been instituted, under the third section of said act, to secure the restoration of all lands within the limits of all incorporated towns in the Territory of Utah, where such restoration has not already been accomplished, to which said towns are not entitled by reason of population or municipal occupation.



Referring to the recommendation heretofore made by this office that the homestead and pre-emption laws be consolidated, it may be pertinent to remark that by the third section of the act "for the relief of settlers on the public lands," approved May 14, 1880, any settler upon any of the public lands of the United States, whether surveyed or unsurveyed, intending to claim the same under the homestead law, is allowed the same time to file his homestead application and perfect his original entry, as is allowed pre-emption settlers to put their claims on record, and it is provided that his right shall relate back to the date of settlement. This enactment destroys one of the material points of difference between the two laws, and by permitting the homestead settler to date the initiation of his right from actual settlement by complying with the condition of perfecting his original entry within the same period allowed to the pre-emptor to file notice of his claim, instead of from the date of entry as heretofore, places the settlers under the two laws upon an equal footing as regards the initiation and protection of their claims from date of actual settlement, thereby presenting an additional and forcible reason in favor of the consolidation of the homestead and pre-emption laws, with a view to the disposal of the public lands to actual settlers in accordance with one general system or policy, which will avoid the many complications which now arise.

The following is a copy of the act approved June 9, 1880, and the instructions issued thereunder to the local land officers:

**AN ACT** to amend sections twenty-two hundred and sixty-two and twenty-three hundred and one of the Revised Statutes of the United States, in relation to the settler's affidavit in pre-emption and commuted homestead entries.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the affidavit required to be made by sections twenty-two hundred and sixty-two and twenty-three hundred and one of the Revised Statutes of the United States, may be made before the clerk of the county court or of any court of record, of the county or State or district and Territory in which the lands are situated; and if said lands are situated in any unorganized county, such affidavit may be made in a similar manner in any adjacent county in said State or Territory, and the affidavit so made and duly subscribed shall have the same force and effect as if made before the register or receiver of the proper land district; and the same shall be transmitted by such clerk of the court to the register and receiver with the fee and charges allowed by law.

Approved, June 9, 1880.

JULY 16, 1880.

**GENTLEMEN:** I transmit herewith copy of an act entitled "An act to amend sections twenty-two hundred and sixty-two and twenty-three hundred and one of the Revised Statutes of the United States, in relation to the settler's affidavit in pre-emption and commuted homestead entries.

The above-named sections required these affidavits to be made before registers and receivers, and this act provides that they may be made before the clerk of the county court, or of any court of record of the county and State or district and Territory in which the lands are situated, and if said lands are situated in any unorganized county, such affidavit may be made in similar manner in any adjacent organized county in said State or Territory.

The affidavit required by section twenty-two hundred and sixty-two is the regular pre-emption affidavit, designated as No. 20, p. 71, General Circular of September 1, 1879, and the affidavit required by section twenty-three hundred and one is in case of commutations from a homestead, as provided in that section, requiring proof to be made in same manner as under the law granting pre-emption rights. The form for the latter affidavit is found in the above named Circular, on page 80, and is designated as No. 35.

I have to advise you in this connection that the accompanying act is to be considered as retroactive in all cases pending, and in which your action has been withheld by reason of the affidavits having been made before such officers as are designated in the act before the date of its approval.

Very respectfully,

J. A. WILLIAMSON,  
Commissioner.

REGISTER and RECEIVER.

This act in permitting claimants to make the affidavit required by sections 2262 and 2301 Revised Statutes before the clerk of the county court or of any court of record of the county and State or district and Territory in which the lands they respectively desire to enter are situated, affords a much needed relief from the burden imposed by the former requirement that said affidavit should be made before one of the land officers for the district in which the lands are situated.

\* \* \* \* \*

### *Homesteads.*

During the fiscal year ending June 30, 1880, there were entered under the homesteads laws 6,045,570.60 acres of public land. This was an increase of 785,459.31 acres over the previous fiscal year. The greatest increase is presented in Dakota, in which Territory there were entered 1,326,945.66 acres, against 867,775.65 acres during the previous fiscal year. In Kansas there was a decrease, the figures being 1,061,512.77 acres, against 1,589,233.61 acres during the previous fiscal year.

\* \* \* \* \*

### *Timber-culture entries.*

During the fiscal year ending June 30, 1880, there was entered under the timber-culture laws the large quantity of 2,193,184.12 acres of land, yet showing a decrease of 573,389.81 acres as compared with the aggregate of the previous fiscal year. In Dakota there was an increase, 868,747.39 acres having been entered as against 731,687.73 acres the previous fiscal year. In Kansas 420,952.35 acres were taken up, less by 694,706.77 acres than the number taken in the previous fiscal year. In Nebraska the entries reached 482,992.21 acres, against 465,968.91 acres in the previous fiscal year.

*Timber-culture rulings.*—Rulings and decisions under the timber-culture acts have been made since the close of the previous fiscal year, as follows:

1. The right of timber-culture entry may not be exercised by a party to appropriate land cultivated and covered by the valuable improvements of another and in the possession of another, but only upon unimproved "public lands." The doctrine which the U. S. Supreme Court in the case of *Atherton vs. Fowler* (6 Otto, 513) say should govern in pre-emption cases, where forcible seizure and entry of the improvements of another is contemplated, to the effect that such lands are not subject to pre-emption, should govern in timber-culture entries. (Secretary's decision of July 17, 1879, case of *Shadduck vs. Horner*.)

2. Unless land is naturally devoid of timber it cannot be entered under the timber-culture law. Where the timber has been cut off, the land is not subject to such entry. If saplings or young timber trees are found growing on the land, it cannot be entered for timber-culture purposes. (Acting Commissioner's letter to Hon. John A. Anderson, House of Representatives, December 18, 1879.)

3. Although a fractional section naturally devoid of timber may contain less than 640 acres, parties are entitled to entry of 160 acres of land embraced therein under the timber-culture law. (Commissioner's letter to register and receiver, Watertown, Dak., September 25, 1880, case of *Job K. Harr et al.*)

4. Where a party secures a written relinquishment of a timber-culture claim, and files it in the proper land office with his own application to enter under the timber-culture law the land therein described, such party will be treated as a contestant, and will, upon cancellation of a prior claim, be allowed to make entry as sought. (Acting Commissioner's letter to Salem F. McKinney, esq., March 3, 1880.)

5. A party contesting a timber-culture entry and filing his application to enter the land has, on the cancellation of the entry, the preference right to enter the land under the homestead law. The application to enter should be made in proper form and noted on the records by the local officers. On the cancellation of the entry, notice should be given and a reasonable length of time allowed to the contestant to complete his entry by filing the necessary affidavit showing his personal qualifications. No fees are to be tendered until completion of the entry. No improvement and settlement made by contestee after initiation of a contest against his entry shall accrue to his benefit, or act to defeat the vested rights of a contestant and applicant. (Secretary's decision of March 4, 1880, case of Kinney *vs.* Degman.)

6. In case of contest against a timber-culture entry, it was held that testimony taken on a published notice to the parties to appear at the office of a notary public will not be considered, as the right of parties in contested cases must be determined on testimony taken on *trials* before the register and receiver; but depositions in a case *pending* before the local office may be taken elsewhere and submitted as evidence, if previously allowed by the register and receiver. (Secretary's decision of March 15, 1880, case of Day *vs.* Bright.)

7. An excess not to exceed twenty acres may be allowed in timber-culture entries where, as in fractional sections, such entries appear unavoidable. Such excess over one hundred and sixty acres must be paid for as in homestead entries. (Commissioner's letter to register and receiver, Le Grand, Oreg., March 16, 1880.)

8. A party alleging that a timber-culture claim has been sold and relinquished is entitled to initiate a contest against the same, notwithstanding the first year from date of entry may not have elapsed, or that the relinquishment is held by a third party. Such relinquishment or sale is a waiver of the right of the entryman, and cases of this character do not come under the general rule that contests must be initiated subsequent to the expiration of one year from date of entry. (Secretary's decision of April 5, 1880, case of Greene *vs.* Graham.)

9. Abandonment is not now a ground for contest against a timber-culture entry. An allegation of failure to comply with the law is the only basis of procedure against an entry. The third section of the act of June 14, 1878, differs from the corresponding one in the act of March 13, 1874, in this, that in the former the clause making abandonment a cause for contest appears to have been stricken out, leaving only failure "to comply with the requirements of the act" as a basis for procedure against a valid entry. The provisions of the later act are not merely engrafted into the prior one, but the later act is a substitute for the prior, and by the later we are to be governed. (Commissioner's letter to register and receiver, Concordia, Kans., April 15, 1880, case of the application of Noble P. Woolpert to contest the entry of J. S. Betts.)

10. In the case of a contest against a timber-culture entry made under the act of March 13, 1874, in which the trial took place before the passage of the act of June 14, 1878, it was held that the decision of the case determined the rights of the claimant *as of the date of the trial*, and that where failure to comply with the act of 1874 has been shown prior to

the enactment of the act of 1878, the later act affords no relief, presuming that such acts have been performed as would constitute a compliance therewith, which, however, it was decided, had not been done in the case under consideration. (Secretary's decision of April 30, 1880, case of *Lee vs. Moran*.)

11. Planting and cultivation of the following trees is regarded as satisfying the requirements of the timber culture act, viz., cedar, pine, fir, larch, elm, oak, black locust, honey locust, alder, beech, plane tree (cotton tree, buttonwood, or sycamore), chestnut, spruce, ash, birch, service tree (mountain ash), maple (including box-elder), walnut, cottonwood, white willow, hickory, white wood (tulip tree), butternut, and basswood. (Commissioner's letter to C. S. Getchell, esq., May 18, 1880, and to Shubal Hammon, esq., June 3, 1880.)

12. The year within which the timber-culture claimant under the act of June 14, 1878, must break five acres does not expire until the end of the last day of the year from and after the day of entry. For example: in case of an entry made September 17, 1878, the first year did not expire until the close of the 17th day of September, 1879, and it was the right of the party to do the breaking on said last day of the year. A contest on the ground of failure to do the breaking within the first year would not lie until the expiration of the last day thereof, as above computed. This ruling was made in the case first referred to below, and it was also held that where a prematurely initiated contest had been entertained erroneously by the local land officers, it was no bar to the initiation of a contest against the same entry at the proper time by another contestant. (Secretary's decision of May 31, 1880, case of *Tripp & Allen vs. Stewart*.)

13. Parties making timber-culture entry in the arid country in the west, without being certain of obtaining water to break the land and cultivate trees as required by law, do so at their own risk, it being a well-known fact that trees cannot be successfully cultivated there without irrigation. The law is imperative in its requirements; relief is afforded only in instances where the trees, seeds or cuttings, are destroyed by grasshoppers, or by extreme and "unusual drought," as provided in the second section of the act of June 14, 1878. (Acting Commissioner's letter to register and receiver, Denver, Colo., July 14, 1880, case of *Finch vs. Harry*.)

#### *Desert land entries.*

Entries of land under the desert land act of March 3, 1877, entitled "An act to provide for the sale of desert lands in certain States and Territories," during the fiscal year ending June 30, 1880, reach the number of 538, embracing an aggregate area of 155,639.35 acres, this being less than the aggregate of entries last year by 10,357.18 acres.

These entries were made in the different States and Territories as follows: California, 77 entries, calling for 18,600.61 acres; Nevada, 77 entries, 16,191.48 acres; Oregon, 11 entries, 5,144.25 acres; Arizona, 10 entries, 2,559.60 acres; Idaho, 22 entries, 10,190.39 acres; Montana, 134 entries, 53,447.54 acres; New Mexico, 28 entries, 7,753 acres; Utah, 69 entries, 12,454.61 acres; Washington, 12 entries, 2,398.11 acres; Wyoming, 98 entries, 26,899.76 acres.

#### *Hot Springs, Ark., Reservation.*

These springs, which are situated in Garland County, Arkansas, pour forth from the mountain called by the same name, a spur of the Ozark,

at an altitude of 1,360 feet above the level of the sea, and from 50 to 100 feet above the valley of the Hot Springs River. In 1860 Professor Owen (State chemist), of Arkansas, gave the number of springs as 42. In 1875 they had increased in number to 57.

The temperature [says the report of the American Medical Association for 1872, vol. 23, p. 40~] ranges from 93° to 150° Fahr., and the springs discharge over 500,000 gallons of water daily, sufficient in quantity to accommodate with delightful bathing over 10,000 bathers every day in the year. Clear, tasteless, inodorous, these springs pour forth from the Novaculite Ridge waters as pure, bright, and sparkling as the pellucid Neva, more nearly allied to Gastein, in the Noric Alps, and *Pfiffers*, in *Switzerland*, than any known springs; but in regard to climatic advantages, we can justly claim that the climate of Arkansas throughout the year far surpasses the European.

The crude materials contained in the waters are: Silicates with base; bicarbonate of lime; bicarbonate of magnesia; carbonate of soda; carbonate of potassa; carbonate of lithia; sulphate of magnesia; chloride of magnesia; alumina, with oxide of iron; oxide of magnesia; sulphate of lime; arseniate of lime; arseniate of iron; iodine, a trace; organic matter, a trace. The pure, subtile liquid certainly holds in refinement active mineral ingredients, so that no chemical analysis can resolve satisfactorily its true natural combinations or reveal their relations.

In the vicinity of the springs is found an immense bed of superior oil-stone, or *novaculite*, defined as an argillaceous slate, containing fine silicious particles, used for hones or razor stones, which has become an article of trade, and meets with extensive demand for whetstones, being said to be equal to the celebrated Turkish oil-stone. It is now generally admitted that De Soto and his men camped here but a short time before the death of their leader, and so invigorating did they find the waters that they imagined they had discovered the Fountain of Youth. The United States acquired title to the country embracing these springs as part of the Louisiana purchase from France in 1803. French traders and trappers came to the springs every year after the early settlement of Louisiana, but it was not until 1807 that any permanent improvements were made or a settlement established. At that time Manuel Preedhouse, a Frenchman, built a shanty and established a trading post. John Perciful and Isaac Cates camped here the same year. Perciful in the spring of 1808 cleared a small patch and established a residence about seven miles from the springs. In 1809, Preedhouse gave or traded his shanty to Perciful, who erected a few cabins, and in other ways prepared for the reception and entertainment of visitors; for even at this early day the curative properties of these waters had become known. A few visitors came in 1810 and 1811. In 1812 the number of cabins had considerably increased, and persons resorted to this then sequestered spot to avoid the associations of the Army and horrors of war. Perciful continued to reside upon his farm seven miles from the springs, removing to the latter for the summer months and opening a hotel, thereby finding a market for the produce of his farm. It was upon this intermittent residence that Perciful based his claim to a pre-emption right. In 1825, or thereabouts, Perciful rented or leased for a term of five years the springs property to one Belding, who for that period of time occupied the house and acted as "mine host." It was upon this residence and occupation that the heirs of Belding claimed the right to purchase under the pre-emption law. July 5, 1818, the Indian title was extinguished by treaty with the Quapaws. January 27, 1819, Samuel Hammond and Elias Rector, who held as assignees New Madrid certificate of location No. 467 for 200 arpents, caused that quantity of land to be surveyed in such a manner as to embrace the springs, and returned the certificate together with a plat of survey to the recorder of public lands for that land district, with the request that the transaction be made a matter of record to the end that patent might issue for the land

as surveyed. That officer refused to allow the entry upon the ground that the United States surveys had not so far extended as to include the tracts applied for.

In 1832 Congress decided to reserve these springs for the benefit of our afflicted fellow-citizens and pleasure seekers, and accordingly it was provided, by the third section of the act of 20th April of that year (4 Statutes, p. 505)—

That the Hot Springs in said Territory (Arkansas), together with four sections of land including said springs, as near the center thereof as may be, shall be reserved for the future disposal of the United States.

The public lands survey did not extend to this locality until during the first quarter of 1838, which survey was duly approved by the surveyor-general April 30, 1838; and the President, in his proclamation of May 16, 1839, for the sale of lands in the Washington (Arkansas) land district, embracing the land in question, reserved for the Hot Springs the following described lands, to wit: South half of section 28, south half of section 29, all of section 32, and all of section 33, township 2 south, range 19 west; and north half of section 4, and north half of section 5, township 3 south, range 19 west, which tracts composed the original reservation.

The passage of an act June 21, 1866 (14th Statutes, p. 60), providing that the lands in Arkansas and other Southern States should not be otherwise appropriated than according to the provisions of the homestead law, was made the foundation of a claim that the lands embraced in this reservation were subject to settlement and entry under that law, and the register of the Camden (Arkansas) land district allowed during the month of January, 1875, the greater portion of said reservation to be entered by various parties as homesteads. These entries this office refused to recognize as valid, and held them for cancellation. Henry C. Miller and others appealed from the decision of the Commissioner of the General Land Office to the Secretary of the Interior, who, by his decision of September 23, 1875, affirmed the decision of the Commissioner. The entries were then canceled and the record cleared. By this time the Hot Springs settlement had reached the dimensions of a city.

In 1870, recognizing the importance of the interests involved, and desiring that innocent purchasers should not suffer, Congress, by act of May 21 of that year (16 Statutes, 149), provided that persons claiming title, legal or equitable, to land in this reservation, might bring suit in the Court of Claims for the settlement of their rights. The act prescribed the manner in which the suits should be brought, and enlarged the jurisdiction of said court to embrace them. The fifth section provided that in case "the decision of the court should be adverse to the claimants, and the land or any part thereof adjudged still the property of the government, the court shall order said land into the hands of a receiver." The act made it the duty of the receiver to rent out the land for the benefit of the United States until Congress should by law prescribe the manner of disposal, and gave to either party the right of appeal to the Supreme Court of the United States.

Quite a number of claimants availed themselves of the provisions of this act, and instituted suits for the confirmation of their titles. The decision of the Court of Claims was adverse to the plaintiffs, and an appeal was taken to the Supreme Court. The cases were heard at the October term, 1875, and Mr. Justice Bradley delivered the opinion of that body, sustaining the decision of the Court of Claims. This, of course, settled the question of title, and it then became necessary, in order that hardships should not be imposed, and that those who had be-



come innocent purchasers might procure legal title to the land occupied by them, for Congress to make provisions to that end. Accordingly, the act of March 3, 1877 (19 Statutes, p. 377), was passed, repealing that portion of the act of May 31, 1870, creating a receiver, with a reservation to the government of the right to collect rents already due. It required the President to appoint three commissioners, two of whom should constitute a quorum; required them to meet in the city of Hot Springs within thirty days after their appointment; prescribed the manner of organization, and of advertisement of time and place of meeting; required that certain evidence should be taken, and defined the manner of taking the same; made it the duty of the commissioners to lay out said reservation in blocks and lots; reserved from sale that part of the land including the Hot Springs, and provided for the appointment of a superintendent of said reservation. It empowered the Secretary of the Interior to levy a special tax upon the water of said springs sufficient to pay for the protection and improvement of the same; provided for the sale of lots not reserved, and gave to the claimants whose claims should be favorably passed upon by the commission a preference right to purchase the lots contained therein at any time within twelve months next after notice given as therein required, and made it the duty of the Secretary of the Interior to cause all lots awarded to claimants by the commissioners, where said claimants should fail to pay for the same within the time and in the manner prescribed by law, together with all the land not so awarded nor reserved, to be sold at public auction to the highest bidder, and for not less than the appraised value thereof. It required that notice of such sale should be given, and prescribed the manner of giving the same. The act is quite lengthy and explicit, requiring the performance by the commissioners of various other duties, to which it is unnecessary to refer in detail in this place. Suffice it to say that the commissioners found it impossible to complete the work allotted them in the time (one year) prescribed by law, and it became necessary for Congress to order the appointment of a commission to continue in office for one year after the passage of the law, which was December 16, 1878 (20 Statutes, 258). This act, in addition to reviving the act of March 3, 1877, made provision for free baths.

The commissioners, after careful and untiring labor for more than eighteen months, made their final report to the Secretary of the Interior December 11, 1879. This report was transmitted to Congress with the Secretary's letter of January 5, 1880. (Ex. Doc. 21.)

The labors of the commissioners were performed in a very satisfactory manner, and their report, with the plats and diagrams by them returned to this office, rendered subsequent proceedings under the law easy.

The act of March 3, 1877, while it empowered the commissioners to issue certificates for condemned property, made no provision for the payment of the same; but Congress, by act of June 16, 1880, provided for the location of said certificates upon land within the reservation, the sale of which was ordered, made them assignable, and required the register and receiver of the United States land office at Little Rock, Ark., to issue their certificates for the unsatisfied balance in cases where certificates issued by the commissioners should be surrendered in payment for lots not sufficient to satisfy them in full. The certificates thus issued by the local officers are assignable, and also receivable for lands purchased within the limits of the reservation.

The first section of the last-mentioned act extended the time in which payment was required to be made by parties to whom the right of purchase was awarded from twelve to eighteen months next after the ex-

piration of the notice required to be given, as before stated. It also reduced the price of said lots 60 per centum "of the assessed value of said land as placed thereon by said commissioners." Instructions for allowing entries of the awarded lots were sent by this office to the register and receiver of the district land office at Little Rock under date of December 31, 1879, March 16, 1880 (telegram), April 17, 1880, and July 16, 1880. Section 3 of the act of June 16, 1880, forever reserves from sale, and dedicates to public use as parks, the North Mountain, West Mountain, and Sugar Loaf Mountain. Section 4 relates to cemetery lot, and provides that—

Whenever the town of Hot Springs shall procure elsewhere a suitable burying-ground, and shall cause the bodies now buried in the cemetery lot within the limits of said town to be decently removed and reinterred, the title to said cemetery lot shall rest in the corporation of said town, to be held and used forever as a town or city park, and not otherwise.

This office is not advised that any steps have been taken by the town authorities under this provision.

Section 5 requires that "six lots from the unawarded grounds on the Hot Springs Reservation be set apart for the use of the common schools of the corporation of the town of Hot Springs, as sites for school-houses." No action in this respect has been taken, so far as I am advised, nor have any suggestions on this subject been received as yet at this office from the local school authorities as to the proper selections to be made so as best to subserve the interest represented by them and which is to be benefited. This section also authorizes the conveyance of a suitable lot of ground, not exceeding one-eighth of an acre in area, "from that portion of the Hot Springs Reservation laid off in lots and blocks, and forming part of the town-site, but not awarded to any claimants and not otherwise disposed of by this act, to the Baptist Church of Hot Springs, whose church edifice was destroyed by fire.

The Secretary of the Interior, under date of June 24, 1880, referred to this office an application by J. B. Wood *et al.*, trustees of the Baptist Church, for a certain parcel of land in block No. 134. It appeared, however, that the block applied for contained more than one-eighth of an acre, and as there is no law authorizing the division of lots or blocks, as surveyed and established by the commissioners, the application of said trustees was rejected and they advised that they were at liberty to make a selection of a lot according to the legal requirements as to area.

The seventh section provides for the sale at public auction of the lots and blocks not awarded to claimants and not otherwise disposed of or reserved by the act. No steps have been taken tending to a public offering under this provision and it would seem to be proper that the church and school lots should be set apart and made permanent reservations before such an offering is made.

Up to the 30th of June, 1880, the local officers at Little Rock, Ark., have reported the entry of six lots of those awarded to claimants by the commissioners, for which \$1,640 were paid. This left 1,429 lots which were awarded, and not entered at the close of the fiscal year.

The seventh section of the last mentioned act provides that all moneys received from sales—

shall be held as a special fund for the improvement and care of the present reservation at Hot Springs and of the Hot Springs Creek adjacent to and between the present reservations and for the maintenance of free baths for the invalid poor of the United States.

\* \* \* \* \*

*Swamp and overflowed lands.*

During the year, 211,424.53 acres have been claimed and reported to this office as swamp and overflowed lands inuring to the several States under the acts of Congress granting such lands, making the whole amount claimed and reported under said grants 69,206,522.06 acres.

Lists embracing 3,295,727.35 acres have been formally approved, increasing the total amount thus approved to 54,828,350.43 acres. This includes 8,291,311.91 acres approved to the State of Louisiana pursuant to the provisions of the act of March 2, 1849 (9 Statutes, p. 352), under which the approval has the force and effect of a patent, of which 86.60 acres were approved during the last fiscal year.

Under the grant of September 28, 1850 (as revised, sections 2479, 2480, and 2481, Revised Statutes), patents have issued for 3,757,802.39 acres, making the total area patented under said act 43,241,349.78 acres.

Under the act of March 2, 1855 (section 2482, Revised Statutes), 419,534.41 acres have heretofore been patented as indemnity for that amount of swamp and overflowed lands located with military bounty-land warrants or scrip.

The aggregate area finally disposed of by approval under the act of 1849, and by patents under the other acts relating to swamp and overflowed lands, from the date of the passage of said acts to the close of the fiscal year, is 51,952,196.10 acres.

The following summary of the more important work of the division in connection with the adjustment of claims under the grants above cited is submitted:

Number of letters received.....	1,685
Number of letters written .....	1,713
Pages of letter record covered .....	1,535
Number of lists prepared for approval.....	28
Certified copies of lists prepared and transmitted to the governors of the several States and the local land offices .....	57
Number of patents executed .....	22
Pages of patent record covered.....	144
Number of contested cases decided.....	103
Number of tracts examined with the field notes of survey to determine their character .....	18,609
Number of tracts upon which claims for indemnity have been adjusted upon testimony submitted .....	750
Certified copies prepared for individuals .....	16
Entries and locations held for cancellation for conflict with claims under the swamp grants.....	178
Entries and locations heretofore suspended for conflict with claims under the swamp grant examined and relieved from suspension .....	172

Considerable progress has been made in the work of adjusting the swamp-land grants, and in the adjustment of claims under the acts providing for indemnity for swamp and overflowed lands.

Claims for indemnity for over 30,000 acres have been adjusted, and the necessary examinations of the records preliminary to taking up the evidence relating to claims for a still larger amount have been made.

Under the appropriation for the expense of adjusting claims for swamp lands and swamp-land indemnity, five agents have been employed in making examinations in the field of lands claimed under the swamp grants, the greater part of their time being devoted to the examination of tracts for which indemnity is claimed, and attending at the taking of testimony touching the character of such tracts, in accordance with the regulations now in force. Their work was suspended for two or three months on account of the appropriation having been exhausted, but

was resumed on a further appropriation made shortly before the close of the fiscal year. In addition to investigating and reporting upon the claims which have been adjusted, they have examined and reported upon several hundred tracts for which indemnity is claimed and upon which testimony has been taken, or yet remains to be taken.

As they are still engaged in the investigation of these claims, the exact amount of land examined, or upon which testimony has been taken, cannot be stated.

A large number of entries and locations which have for years remained suspended in other divisions on account of conflict with claims under the swamp grants were referred to this division. These cases have been taken up as rapidly as possible, and satisfactory progress has been made in the work of settling the conflicting interests.

The clerical force of the division was slightly increased during the latter part of the year, and as the new force acquires experience in the several branches of the work, this will secure a more rapid adjustment of the claims arising under the several acts relating to swamp and overflowed lands, and also aid in bringing up that portion of the work heretofore in arrears.

Several of the more important decisions of the department rendered during the year are appended, reference being made also to the Secretary's decision in the case of *Dennis Crowley vs. State of Oregon*, given in another place under the head of *pre-emptions*.

\* \* \* \* \*

#### TIMBER LANDS—TIMBER DEPREDATIONS.

Efforts toward the suppression of timber depredations on the public lands have been as vigorously continued since my last annual report as the appropriations made by act of Congress approved March 3, 1879, for that purpose, would permit. Under that act there were provided, "to meet expenses of protecting timber on the public lands, forty thousand dollars, to be made available immediately." This provision admitted of the employment of special agents in investigating public timber trespasses and collecting testimony in the various public land States and Territories, as follows: In Alabama, two; Colorado, one; California, one; Florida, one; Louisiana and Mississippi, one; Michigan, one; New Mexico, one; Oregon, one; Wisconsin, four; Washington Territory, one; Wyoming Territory, one.

The appropriation being found inadequate to the requirements of the service, it became necessary to withdraw in the autumn the agents from California and Oregon, and three of the agents from Wisconsin, leaving but one in that State. The work of investigation was continued in other parts of the field until about the middle of February last, when the exhaustion of the appropriation made it necessary to suspend operations in Florida, Alabama, Mississippi, Louisiana, Michigan, and Washington Territory, until a further appropriation could be obtained. The prosecution of pending suits in the United States courts of said States and Territory was greatly embarrassed in consequence.

The services of special agents acting under registers and receivers in Colorado, New Mexico, and Wyoming were continued under the provisions of section 2 of an act of Congress approved June 3, 1878, entitled "An act authorizing the citizens of Colorado, Nevada, and the Territories to fell and remove timber on the public domain for mining and domestic purposes." In Wisconsin several cases of timber depredation have been investigated and found to be of vast magnitude, involving such important interests to the government that it was deemed essen-

tial to continue the work of the agent in that field. He was therefore put upon the rolls of this office and detailed to carry on the work already begun.

Under act of Congress approved June 16, 1880, there were appropriated, "to meet expenses of protecting timber on the public lands, forty thousand dollars," thereby enabling previously suspended efforts against the spoliation of the public timber to be renewed.

The measures that have been taken against the waste and destruction of the public timber have greatly mitigated the evil, and served to check saw-mill owners, lumbermen, and railroad-tie contractors in their unlawful operations upon the public timber lands, and large amounts of money have been received for stumpage and from suits instituted on account of timber trespass.

During the cessation of watchful vigilance upon the part of the government, however, necessitated by the lack of needful funds, the depredators upon the public timber became emboldened in many localities to resume their unlawful acts; and numerous complaints have been received from residents and from settlers in the various public-land States and Territories of the extensive trespasses upon the public timber, committed to the annoyance of the peaceable and well-disposed citizens, to the injury of their interests, and to the great injury of the public domain and of the public interests in general. Requests are received from every direction that special agents should be sent to stop the plundering upon the public timber, but it would be impossible to meet all the demands of this kind with the funds at any time available for this purpose.

In the Gulf States, where there is such ready access to the shipping ports, especially Pensacola, the greatest lumber exporting port in the country, the depredations upon the public timber are very extensive. Very few new cases of trespass, however, have been investigated; owing to the limited amount of the appropriation that could be used for this section of the field, and the prospect of its speedy exhaustion, the special agents were directed to chiefly confine their efforts to securing the testimony needed to sustain pending suits.

In Alabama the timber trespasses exceed in number and extent those of any other Southern State, and are carried on to an alarming extent in the southern counties. Fine ship timber in great quantities, cross-ties, boards, and shingles, are derived from the government lands, and to such an extent that the pine and chestnut and other valuable trees are being nearly all destroyed. Pine trees, large and small, are boxed for turpentine, and are thus rendered in a few years valueless for any purpose.

A vast proportion of homestead entries have been fraudulently made by men of wealth and prominence. Several owners of iron works and lumber mills have furnished money to their employés, many of them ignorant and lawless men, to enter the lands in the vicinity of the furnaces and mills for the sole purpose of acquiring the timber thereon. In one instance, nearly ten sections of public land were thus entered by an iron company. From lands so entered mill owners in both this State and Florida have cut individually from five thousand to ten thousand logs every season. The special agent recently reported 16,100 pine saw-logs cut from lands illegally entered and sent to the mills in Florida. These lands were entered in some cases in the names of members of a family including the young children.

The law-abiding citizens entertain well-grounded fears that the timber of their State will soon be entirely destroyed, and they urgently request that such wanton destruction may be stopped and that another special

agent might be sent among them, as the time and attention of the agents already in this part of the field were so fully occupied with completing the evidence for sustaining the numerous suits pending in the courts of the three judicial districts of the State.

Many suits have been instituted and judgments and convictions rendered. Legal proceedings against several iron companies, referred to in my last report as then being instituted, resulted in one instance, by agreement with the department, in being compromised, upon payment into the court of \$4,400 and costs of suit. In suit against another iron company the evidence showed conclusively the trespass, and the charge of the judge was direct and positive as to the law, but the jury returned a verdict for the defendant. The effect of the suits brought before the United States court in the middle district of Alabama has, in spite of the many obstacles that have intervened in the prosecution of parties guilty of timber trespass, been very salutary, and a decided check has been given to depredations upon the public timber in the central part of the State. In the northern judicial district of the State a number of criminal and civil cases have been continued. In the southern judicial district quite a number of cases reported by the special agents are now pending, involving the sum of \$40,887.25. Suit is pending, against an extensive mill company in Florida, who have cut to the extent of 50,000 logs, a portion of which came from lands stripped under color of title from grants to the railroad company. Suits are pending for trespass by boxing the trees for turpentine, one of which involves 4,680 acres of land, most of which was fraudulently entered, and the other involves 3,100 acres of public land, for which an offer of settlement at the rate of 40 cents per acre was made but not accepted.

Three civil cases have been tried and verdict rendered for the government, with judgment amounting to \$1,040.10 and costs.

Trespasses committed by bark contractors are frequent and extensive. In some cases the trespass extends over several quarter sections. It is estimated that \$50,000 worth of tan bark has been illegally taken from public lands.

In Florida, since the appointment of special agents to look after the matter of depredating upon public lands, the loggers have become less reckless in their operations than before, and persons legitimately engaged in the lumber business are more careful not to incur any risks in being reported as trespassers upon the public timber. The evil, however, has not been wholly eradicated, and trespassing is yet extensive. The watchful protection of the government is required over the still immense extent of finely timbered public lands tributary to Pensacola, and over the vast ranges of fine timber country in other parts of the State.

Trespassing in this State may be classified as follows:

The cutting and removing of pine and live oak trees.

Boxing pine trees for turpentine and naval stores.

Cutting and removing the palmetto tree for manufacturing it into paper, and for its use as logs in building wharves.

Making fraudulent entries for the sake of the timber, without compliance with the requirements of the law.

Vast ranges of the finest timber in the world, growing in this State, have been despoiled by mill owners and lumber companies; and thousands upon thousands of trees have been tapped for turpentine. Extensive turpentine distilleries are found in Suwannee and Escambia Counties, a large proportion of whose supplies are drawn from the trees on public lands.

Many suits, both civil and criminal, involving large interests to the



government, have been instituted and are yet pending in the United States courts at Jacksonville, Pensacola, and also Mobile, owing to the fact that the trespasser, in some cases, residing in Florida, has trespassed upon the public lands in Alabama, whence the logs have been rafted to the mills in Florida. A replevin suit is pending against a large mill company, which, without reference to other extensive trespasses charged against them, involves \$10,000. The company offered to compromise by the payment of \$1,500, which offer was not recommended for acceptance. Three civil cases are still pending in the United States court at Jacksonville, having been continued from term to term, and are now set for the next December term of the court.

In Mississippi, trespassing on public lands has become so general that to enter the lands where simply the timber is wanted is considered a useless matter. The log cutters and mill owners have been reported as depredating heavily in Southeast Mississippi, where 70,000 logs are reported as taken from public lands in Jackson, Perry, and Covington Counties. Trespassing by boxing the trees for turpentine is more extensive and destructive even than that so largely committed by the log cutters, and many inquiries are made why the government should allow such extensive tracts of fine pine timber to be thus destroyed. One turpentine orchard is reported as extending over an area of ten square miles, and destroying 600,000 trees, three-fourths of which are on public land. There are many turpentine distilleries all along the Mobile and Ohio Railroad for a distance of 125 miles, whose supplies are received from trees boxed on public lands on both sides of the road, the even sections belonging to the railroad not being touched. At Waynesboro' are six stills constantly running and receiving their crude materials from orchards as far as 20 miles west and from Jones County.

Of the suits referred to in my last annual report, some are still pending, being attended with many difficulties and complications. Others have been settled by confessions of judgment, or compromised and dismissed. One criminal suit has been instituted.

In Louisiana, trespass upon the public timber seems to have virtually ceased in the southeastern section, so long as it is felt that a watch will be kept, but information has been received of extensive trespassing in the northwestern section that should receive attention. A number of logs have been seized in Saint Tammany Parish under writs of sequestration.

In Arizona, considerable depredation upon the public timber has been committed by settlers who, forming co-operative companies, have built first-class completely appointed saw-mills, grist-mills, &c., and seem to have innocently and economically appropriated the timber to the construction of houses, fences, and to other domestic purposes in their own settlements, and not for speculative purposes. When notified by the registers or receivers of the illegality of their acts, they have manifested a readiness to desist from what they had supposed to be a right and lawful course; but they ask for a liberal construction of the laws that will permit them to utilize the public timber for their necessary domestic requirements in opening up a new agricultural section of the Territory.

There being no special agent assigned to this locality, cases of reported trespass have been referred to the special agent in New Mexico for investigation and report.

In California, much depredation upon the public timber is committed by the mill owners, who destroy more timber in a month than a settler does in years. Numerous saw-mills are in operation, and annually consume great quantities of sugar pine taken from the public lands in Butte, Plumas, Tehama, and Nevada Counties.

Much trespassing is reported upon the redwood pine found on the public lands of Humboldt and Mendocino Counties.

A case involving 3,500,000 feet of lumber, besides several other large cases, was referred to the United States attorney for prosecution, but there being no available funds for the expenses necessary in summoning witnesses, &c., the matter could not be laid before the grand jury. The necessary withdrawal of the special agent from this State last November left the United States attorney without his needed assistance in making prosecutions effective, by affording an accurate description of the lands trespassed upon, and furnishing names of the witnesses having a personal knowledge of the facts.

In Colorado heavy depredations have been reported by the agent, and complaints have been received from individuals of the wanton and fearful destruction of the timber in the vicinity of Leadville. Saw-mill men are represented as being so aggressive and greedy that they not only cut at will upon the public domain, but invade the claims of the miner. They state that a number of saw-mills are running night and day, averaging each 8,000 feet of lumber every ten hours, all of which is obtained from the public lands and mining claims. The special agent reports twenty-two saw-mills in that vicinity, manufacturing in the aggregate 110,000 feet of lumber daily, from timber purchased by parties making a business of logging, and locating claims for the sole purpose of disposing of the timber thereon. They cut large quantities of young timber for speculative purposes, and dispose of it for timbering mining shafts and tunnels.

Hundreds of charcoal burners consume in the aggregate 1,200 cords of wood daily, and use chiefly the small trees from three to six inches in diameter, it being more easily handled and quickly charred. This is done in direct violation of the law and of departmental regulations under act of June 3, 1878, for the protection of the undergrowth of timber on the public lands. Standing timber, recently killed by fire, being best for charring, large areas of timber near Leadville have been put in that condition. Fires rage in the mountains for many months in the year.

Fourteen smelters are reported as having on hand not less than 100,000 cords of wood; around nearly all these smelters, the wood is piled up by the acre. In one locality \$1,200 worth of wood is reported cut for the smelters, and more contracted for to the value of \$24,000. Homesteads are entered for the sole purpose of stripping the timber therefrom, which being done the lands are abandoned for others, entered with the same intent.

Many of the trespassers are ready to compromise with the government, while others are defiant and determined to resist authority. A number of trespassers were brought before the United States commissioner at Leadville, but the witnesses, fearing prosecution in case they testified to cutting under agreement with the principals and owners of the charcoal-pits, the necessary testimony was not elicited.

From Northern Colorado appeals have been received from parties interested in developing the agricultural resources of that section for the protection of the government against the cutting of public timber along the upper waters of the Cache la Poudre River by tie contractors, whose wholesale destruction of the public timber causes an untimely melting of the snows, and thereby destroys the supply of water needed at irrigating seasons. Tie contractors are actively engaged in their operations, notwithstanding their distinct understanding, at the time of settlement for stumpage on ties cut prior to June 17, 1879, that the gov-

ernment would not permit further cutting under any consideration of settlement. Information is received of one tie contractor having secured a contract for 100,000 ties, to be delivered at Fort Collins.

In Northwest Colorado more timber is destroyed by the forest fires than is unlawfully cut by trespassers. Thousands of acres are reported as burned over, destroying millions of dollars' worth of fine timber. Five or six fires are often burning at one time, and continue for weeks and months; they are started sometimes by the Indians, and often result from the carelessness of campers and pleasure-seekers. A case of fire was reported as raging for three months and destroying the timber for a distance of twelve miles.

From Dakota reports are received of trespass on the public timber growing on many of the islands in the Upper Missouri River. Thirty thousand cords of this wood are used annually in supplying the steamboats plying on the river.

Petitions are received from the citizens, miners, and business men, asking that immediate steps be taken to prevent the abuse of timber privileges, and that a duly authorized agent be sent to co-operate with the United States attorney in this matter. They allege that the timber in the Black Hills in and about the sources of the Whitewood and White Tail Creeks is being stripped from the public lands, and represent the danger of its soon being entirely destroyed unless the spoliation is stopped. In the eastern portion of the Territory complaint is made of the daily and outrageous destruction of the public timber for traffic.

In Idaho many saw-mills are found located upon unsurveyed public lands in Nez Perces, Lemhi, Bear Lake and Oneida counties. With a capacity ranging from 3,000 to 12,000 feet per day, they are manufacturing timber, taken from both mineral and non-mineral lands, into ties, shingles, rails, &c., for speculative purposes.

Suits, both civil and criminal, have been recommended against the owners of several saw-mills in active operation upon unsurveyed non-mineral public lands near Cottonwood Cañon. Since June 17, 1879, they have cut 700,000 feet of lumber according to their own admission. They seem defiant in their unlawful acts, having previously been indicted for public-timber trespass, and released under-bonds, and have perfectly understood that they were rendering themselves liable to criminal prosecution.

In July last reports were received of irresponsible parties bringing down the Clearwater River, every week, rafts of wood, saw-logs, shingles, timber, and rails, which, in the absence of authority to seize the timber, and because of the slow process of indictment, was done with perfect impunity, and without fear of punishment. Suits were instituted involving 307,540 feet of lumber and 369½ cords of wood. Department rates of stumpage to the amount of \$492.29 being received the suits were dismissed.

The Northern Pacific Railroad Company have cut an immense number of railroad ties from unsurveyed public lands on the South Fork of the Yakima River, claimed as "adjacent" lands within the meaning of the act of March 3, 1875 granting timber &c., "from the public lands adjacent to the line of said road." The term *adjacent* is by them construed to mean nearest accessible.

From Kansas and Missouri complaints are received of public-timber depredations on the Osage trust lands, and all along the Osage River, where the lands are pre-empted and homesteaded, and the timber removed therefrom without evidence of actual settlement, and in some

cases without any pretext of title. The timber is cut into cord-wood and removed at the rate of from fifty to seventy-five loads daily; it is also largely used for railroad ties.

From Nebraska similar complaints are received.

In Michigan a suit is pending, involving upwards of 2,000,000 feet of lumber. Large depredations are committed upon the public timber in the vicinity of Thunder Bay. The Canadians are lumbering extensively on the public lands in the vicinity of Sault Ste. Marie and on the shores along Lake Huron.

A number of logs were found which had been unlawfully cut from the Isabella Indian Reservation and left without any claimant. They were sold, and the proceeds of sale were deposited in the United States Treasury.

In Nevada the public timber is greatly depredated upon, and the cutting of young saplings is very extensive. In one locality 100,000 cords of wood and a great quantity of sawn timber, taken from public lands, are now ready for delivery. The purchasers of timber lands legitimately engaged in the lumber business, find it impossible to compete with lumber dealers who obtain unlawfully the public timber. They, and parties engaged in mining interests, are very urgent in their desire that stringent measures shall be taken against such reckless and lawless operations.

Two suits in trover are pending in the United States district court wherein the amount claimed for the government aggregates \$99,000.

In New Mexico much bold and lawless trespassing has been committed by saw-mill owners and lumbermen. The agent has investigated and reported upon cases involving 1,169,984 feet, 23,000 shingles, 41,050 laths, which is but a small portion of the depredations upon the public timber. Mills with a capacity of 15,000 feet per day are located upon unsurveyed public lands, and upon unconfirmed private land grants, in the midst of the finest pine lumber region. The lumber that is manufactured is sold for speculative purposes, as are also the wood and timber taken from the public mineral lands.

Some of the trespassers have manifested a readiness to settle for the public timber they have taken, while many seek to shelter themselves behind the fact that the timber was cut and used for building, agricultural, mining, and other domestic purposes.

Stumpage has been paid to the amount of \$447.36 on 447,360 feet of lumber. Demands for settlement have been made upon other trespassers, failing which suits will be recommended against them.

In Oregon much in the way of prevention of timber trespass has been accomplished by the services of the special agent. The attention of the people is awakened to the fact that the government intends to protect its timber, and that trespassers may not commit depredations with impunity. Public sentiment is opposed to trespassing along the coast, where there are fine forests of public timber, much of which is manufactured into lumber and shipped to San Francisco and Mexico.

Cases of trespass have been investigated and reported involving two millions and a half feet of public timber, and hundreds of cords of wood, all of which was cut and sold for speculative purposes.

In order to secure a personal interest in the preservation of the timber, and thereby favor a continuance of irrigation of the lands by rain-falls and melting snows, it has been suggested that there should be such legislation as would enable actual settlers upon arable land to obtain, in addition to their claim, either with or without payment, forty acres or less, in proportion to their claims, of timber-land somewhat near to their farms.



In Utah there are many complaints made of the cutting and removing of timber from the non-mineral lands by mine owners, to the detriment of the settlers.

Demands for stumpage have been made upon 465,000 feet of lumber and 550,000 railroad ties, to which response has not yet been had. Stumpage has been received to the amount of \$4,174.75 on 166,991 ties, and \$235 on lumber, all of which was cut prior to June, 1879.

In Wyoming, as in Utah, the tie business has been checked, but without careful watching and timely warning upon the part of the agents the public lands would be as much resorted to by tie contractors as other lands.

Very little new trespass has been reported from this Territory. The efforts of the special agent have been mainly directed to the settling of old cases.

Stumpage has been received to the amount of \$2,265.82 on 90,634 cross-ties.

In Washington Territory whatever irritation may have been created at the outset by the efforts of the government to protect the public timber has greatly abated, and there is now a general feeling of satisfaction even among those upon which the heaviest fines were imposed, and now every legitimate logger, bona fide settler, and business man of character desire a continuation of these efforts until the practice of trespassing upon the public timber shall be stopped. The work of the special agent has stimulated the legal acquisition of lands. Many logs were seized, some of which were released under bond, and balance sold. The proceeds of the sale amounted to \$1,276.66, which sum was paid into the United States court, subject to its order.

Owing to the complicity of the community in timber depredations it was found difficult to secure convictions in criminal prosecutions before the juries, but forty cases of trespass in the vicinity of Puget Sound, brought for civil action in the United States court, were adjusted and aggregated, on account of fines and costs, \$8,053.67, of which amount \$6,843.67 have been paid into the court. There are about thirty cases in the same vicinity yet to be adjusted—twenty-five in the Columbia River region and fifty east of the mountains, which it is hoped may be soon adjusted as the Territory is being so rapidly settled.

Trespassing in the region of Puget Sound has received a wholesome check, but attention has been asked to trespasses in Shoalwater Bay, Willapa, and Columbia River country, in Western Washington.

In Eastern Washington the rapid growth of the country is leading to the establishing of many saw-mills and other agencies for the destruction of the timber. Private speculators are cutting large quantities of timber on unsurveyed and other public lands along the Yakima River and elsewhere. Railroad companies, under a very free construction of the language "public lands *adjacent* to said railroad lands" are trespassing largely upon the public timber and tie contractors are actively engaged in filling immense contracts.

The supply of public timber in Western Washington is likely either to be exhausted in a few years, or to be controlled and held at a high price by a few individuals; it has therefore been suggested that the government reserve for its own use one or more townships of timber land not valuable for agriculture. Such a township wholly inland has been surveyed, and if no action be taken to prevent it, it is likely that speculators will secure its control for the timber.

It is further suggested that the timber lands be surveyed in order that they may be acquired by actual settlers upon or near them, for the

reason that the timber will be better preserved in the hands of private owners than at present; they will utilize the old and protect the young timber.

It is thought that a repeal of the pre-emption laws, now a prolific source of fraud and perjury, and allowing settlers the lands under the homestead laws only would operate favorably in the protection of the public timber.

In Wisconsin the special agent has been chiefly employed in surveying and scaling the lands trespassed upon, and in securing such evidence and witnesses as are necessary to complete testimony required for a successful prosecution of the cases pending in the United States court.

Fourteen cases have been tried and convictions rendered; the sum of \$9,314.37 has been received on account of fines, costs, stumpage, and sales of lumber seized. Surveys and scaling in cases heretofore reported show trespass to the amount of 4,679,683 feet of logs, 120½ cords of wood, and 2,721 railroad ties.

Of new cases of trespass reported during the past fiscal year the lands in four have been surveyed, and the trespass by actual measurement and count amounts to 305,339 feet. There is an estimated amount in twenty-seven cases of trespass of 13,400,000 feet. The evidence has been completed in ten cases and placed before the United States district attorney, and several cases have been reported to the department recommending suits be instituted.

The work during the past fiscal year of the division having charge of timber depredation matters has been as follows: Letters received, 1,095; Letters written, 771, covering 687 pages of letter record.

#### PRIVATE LAND CLAIMS.

The cases coming properly under this designation are those having their origin in some form of concession from a foreign government, before the acquisition, by the United States, of the territory in which they are located, and are embraced within the purchases of Louisiana and Florida, the cession made by Mexico by the treaty of Guadalupe-Hidalgo and the subsequent Gadsden purchase. The rights of claimants under the several concessions are recognized, and their protection stipulated in the respective treaties of acquisition; and after the confirmation of their claims under the various laws passed by Congress for ascertaining their validity, their proper location, survey, and patenting come within the supervision of the private land claims division of this office. This division also has in charge the examination, location, and patenting of donation claims in the State of Oregon and the Territories of Washington, New Mexico, and Arizona, and of certain Indian claims. It is also charged with the issuing of scrip in satisfaction of confirmed claims, where the land confirmed has been disposed of by the United States, and with the examination and authentication of other scrip issued for like purpose, and with other matters in the service, of character similar to the foregoing.

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#### SOUTHERN PUBLIC LANDS.

Under the act of Congress of June 22, 1876, repealing section 2303 of the Revised Statutes of the United States, provision was made for the restoration of all the public lands in the States of Florida, Mississippi, Alabama, Louisiana, and Arkansas, to ordinary private entry. This



was to be accomplished by offering at public sale, as soon as practicable, the lands affected thereby, according to the provisions of existing law.

The carrying of this law into effect made necessary the examination of every tract or subdivision of land in the States named, the preparation of descriptive lists thereof from the records of this and the several district land offices, and to have executive proclamations prepared and issued and the lands offered for sale.

The public lands in Arkansas, Florida, and Mississippi, as well as those in the former Saint Stephens, Elba, Demopolis, Greenville, Montgomery, and part of the Lebanon districts in Alabama, and the former Monroe, Greensburg, Opelousas, and southeastern districts in Louisiana, were all proclaimed and offered at public sale prior to the publication of my annual report for 1879, a statement of which will be found on pages 221 and 222 of said report.

The residue of the vacant public lands in the States of Alabama and Louisiana were proclaimed and offered as follows: Those in the northern part of the former Lebanon district, and in the Huntsville district in Alabama, not withheld as mineral, February 17, 1880; those in the former Tuscaloosa district in Alabama, not withheld as mineral, February 24, 1880, and those in the northwestern or Natchitoches district in Louisiana, April 13, 1880.

In the examination of the records of this office and a comparison thereof with lists of vacant public lands made up at the several district land offices, during the preparation of the lists for offering, a large number of discrepancies were discovered, which made it necessary to hold from offering a large number of tracts, aggregating many thousands of acres, in order to give time and opportunity for this office to examine the tracts and ascertain the exact status of each, and to correct the records of this and the district offices accordingly.

Since the completion of the lists for the offerings above mentioned, this work of examination has been going on, and it is now well advanced; when completed the lands found vacant, together with those made vacant by the cancellation of abandoned homestead entries since the preparation of the former lists for offering, will be embraced in a list and proclaimed and offered at public sale.

Respectfully submitted.

J. A. WILLIAMSON,  
*Commissioner.*

Hon. C. SCHURZ,  
*Secretary of the Interior.*

No. 1.—*Tabular statement showing the number of acres of public lands surveyed in the following land States and Territories up to June 30, 1879, during the present fiscal year, and the total of the public lands surveyed up to June 30, 1880; also, the total area of the public domain remaining unsurveyed within the same.*

Land States and Territories.	Areas of public lands in States and Territories.		Number of acres of public lands surveyed.				Total area of public land, inclusive of the unsurveyed, and Indian lands reserved, up to June 30, 1880.
	In acres.	In square miles.	Up to June 30, 1879.	Prior to June 30, 1879, not heretofore reported.	Within the fiscal year ending June 30, 1880.	Total up to June 30, 1880.	
Wisconsin.....	34, 511, 360	53, 924	34, 511, 360	.....	.....	34, 511, 360	.....
Iowa.....	35, 228, 800	55, 045	35, 228, 800	.....	.....	35, 228, 800	.....
Minnesota.....	53, 459, 840	83, 531	39, 536, 940	116, 224. 14	296, 253. 46	39, 949, 417	13, 510, 423
Kansas.....	51, 770, 240	80, 891	51, 770, 240	.....	.....	51, 770, 240	.....
Nebraska.....	48, 636, 800	75, 995	40, 715, 571	159, 842. 68	709, 179. 33	41, 584, 593	7, 052, 207
California.....	100, 992, 640	157, 801	47, 979, 543	576, 875. 65	3, 792, 630. 10	52, 349, 048	48, 643, 592
Nevada.....	71, 737, 600	112, 090	12, 872, 308	.....	928, 694. 07	13, 301, 002	58, 436, 598
Oregon.....	60, 975, 360	95, 274	21, 913, 612	101, 186. 85	1, 052, 221. 85	23, 067, 020	37, 908, 340
Washington.....	44, 796, 160	69, 994	14, 736, 403	375, 176. 67	847, 595. 29	15, 959, 175	28, 836, 985
Colorado.....	66, 880, 000	104, 500	23, 354, 523	92, 196. 10	2, 775, 601. 81	26, 222, 321	40, 657, 679
Utah.....	54, 064, 640	84, 476	9, 341, 375	.....	440, 585. 79	9, 781, 960	44, 282, 680
Arizona.....	72, 906, 240	113, 916	5, 499, 353	.....	808, 521. 21	5, 807, 874	67, 098, 366
New Mexico.....	77, 568, 840	121, 201	8, 843, 890	75, 603. 97	1, 624, 156. 41	10, 543, 650	67, 024, 990
Dakota.....	96, 596, 480	150, 932	22, 626, 770	*416, 798. 84	12, 130, 808. 59	25, 174, 377	71, 422, 103
Idaho.....	55, 228, 160	86, 294	6, 933, 429	329, 726. 08	225, 637. 24	7, 488, 792	47, 739, 368
Montana.....	92, 016, 640	143, 776	11, 062, 551	.....	302, 413. 55	11, 364, 904	80, 651, 676
Wyoming.....	62, 645, 120	97, 883	9, 079, 186	.....	184, 449. 68	9, 263, 635	53, 381, 485
Missouri.....	41, 836, 931	65, 370	41, 836, 931	.....	.....	41, 836, 931	.....
Alabama.....	32, 462, 115	50, 722	32, 462, 115	.....	.....	32, 462, 115	.....
Mississippi.....	30, 179, 840	47, 156	30, 179, 840	.....	.....	30, 179, 840	.....
Louisiana.....	26, 461, 440	41, 346	25, 232, 044	.....	80, 504. 58	25, 312, 548	1, 148, 892
Arkansas.....	33, 410, 063	52, 202	33, 410, 063	23, 081. 51	.....	33, 410, 063	.....
Florida.....	37, 931, 520	59, 268	30, 151, 946	.....	.....	30, 175, 027	.....
Ohio.....	25, 576, 960	39, 964	25, 576, 960	.....	.....	25, 576, 960	.....
Indiana.....	21, 637, 760	33, 899	21, 637, 760	.....	.....	21, 637, 760	.....
Michigan.....	36, 128, 640	56, 541	36, 128, 640	.....	.....	36, 128, 640	.....
Illinois.....	35, 465, 093	55, 414	35, 465, 093	.....	.....	35, 465, 093	.....
Indian Territory.....	44, 154, 240	68, 991	27, 003, 990	.....	.....	27, 003, 990	17, 150, 250
Alaska.....	369, 529, 600	577, 300	.....	.....	.....	.....	369, 529, 600
Total.....	1, 814, 788, 922	2, 835, 606	734, 591, 236	2, 266, 712. 49	15, 699, 252. 96	752, 557, 195	1, 062, 231, 727

\* 208, 299.30 acres are embraced in Red Cloud and Spotted Tail Indian reservations. † 67,063.99 acres are embraced in Red Cloud and Spotted Tail Indian reservations.

DEPARTMENT OF THE INTERIOR, GENERAL LAND OFFICE, September 30, 1880.

J. A. WILLIAMSON, Commissioner.

## REPORT OF THE AUDITOR OF RAILROAD ACCOUNTS.

DEPARTMENT OF THE INTERIOR,  
OFFICE OF AUDITOR OF RAILROAD ACCOUNTS,  
*Washington, D. C., November 1, 1880.*

SIR: In compliance with statutory requirements (20 U. S. Statutes, 169, Sec. 3), I have the honor to submit the following report, for the fiscal year ending June 30, 1880, on the condition of the property, business, accounts, and affairs of the several railroad companies to which, or to their predecessors, the United States have granted, and which have directly or indirectly received, any loan of credit or subsidy in bonds or lands, and the geographical location of whose railroads is "in whole or in part west, north, or south of the Missouri River."

## CONDITION OF THE PROPERTY OF THE PACIFIC AND OTHER RAILROADS.

During the fiscal year two inspections of railroad property have been made, the results of one of which were embodied in my last annual report, while those of the other are given in this report, together with the results of an inspection made in August and September, 1880.

The very full and able report of Mr. Aurin B. Nichols, C. E., railroad engineer of this office, is made part of this report, and immediately precedes the appendixes and tables.

The railroads inspected and reported on are as follows, namely:

	Miles.
Union Pacific: Council Bluffs to Ogden .....	1,036
Union Pacific: Cheyenne to Kansas City .....	745
Union Pacific Branches:	
Summit County .....	9
Utah and Northern .....	339
Central Pacific: San José to Ogden .....	872
Central Pacific Branches: Visalia Division .....	147
Leased lines:	
Northern Railway and California Pacific (new route, San Francisco to Sacramento) .....	90
San Pablo and Tulare .....	47
Southern Pacific .....	550
Los Angeles and San Diego .....	28
Los Angeles and Independence .....	17
Southern Pacific of Arizona .....	276
Central Branch Union Pacific: Atchison to Waterville .....	100
Sioux City and Pacific: Sioux City to Missouri Valley .....	76
Northern Pacific:	
Duluth to Bismarck .....	448
Bismarck to Little Missouri .....	152
Kalama to Tacoma .....	105
Tacoma to Wilkeson .....	31
Ainsworth to Terminus .....	18
Northern Pacific leased lines:	
Western Minnesota .....	61
Saint Paul to Sauk Rapids .....	75
Oregon and California: Portland to Roseburg .....	198
Oregon and California leased lines:	
Oregon Central .....	48
Western Oregon .....	50

	Miles.
Saint Louis and San Francisco: Pacific to State line.....	293
Saint Louis and San Francisco leased lines: Atlantic and Pacific.....	34
Missouri, Kansas and Texas: Vinita to Junction City .....	183
Atchison, Topeka and Santa Fé: Atchison to State line .....	471
Saint Paul and Duluth: Saint Paul to Duluth.....	156
Total .....	6,655

It is gratifying to be able to say that, during the past year, the condition of all railroad property in the United States has been much improved, more especially that of the railroads west of the Mississippi River. It is still more gratifying to be able to say that, among those railroads lying west of the Mississippi, the most marked improvement has been on the great trunk line of the Union and Central Pacific Companies and of which the United States Government is a creditor to an amount of nearly \$80,000,000.

Stability of rates, even though rates have been reduced, has given larger earnings, which in turn have enabled liberal expenditures to be made for maintenance and improvement to the manifest advantage of the traveling public and shippers, as well as of the properties themselves.

In order to show the expense incurred in maintaining the several properties and to afford means of comparison, the following tabular statement has been prepared from the reports of the companies rendered to this office for the two fiscal years ending June 30, 1880. The term "maintenance of way" includes the following items: Steel and iron rails; joint fastenings; spikes; frogs and switches; labor repairing track; tools; wages of roadmasters, foremen, clerks, mechanics, laborers, and watchmen; cross-ties; ballast; expenses of road trains—engineers, firemen, fuel, oil, water, &c.; removing snow and ice; repairs of bridges, road-bed, snow-sheds, snow-galleries, snow-fences, shops, engine-houses, turn-tables, station buildings, section houses, fuel and water stations, culverts, tunnels, road-cars, telegraph, and tools; and incidental expenses.

Name of road.	Amount expended for maintenance of way for two years, ending June 30, 1880.	Average miles operated.		Amount per mile per annum expended for maintenance of way.	Order resulting.
		1879.	1880.		
Union Pacific (as consolidated).....	\$5,123,626 25	1,814.8	1,814.8	\$1,411 62	2
Central Pacific .....	4,048,253 67	2,210.7	2,389.9	879 94	7
Sioux City and Pacific .....	289,272 08	107.4	107.4	1,346 70	3
Texas and Pacific .....	1,026,911 00	443.86	483.86	1,106 92	5
Saint Louis and San Francisco.....	568,477 60	333.3	510.1	674 03	9
Saint Louis, Iron Mountain and Southern.....	1,567,521 26	684.5	684.5	1,145 01	4
Little Rock and Fort Smith .....	105,497 49	165	165	319 69	14
Missouri, Kansas and Texas.....	815,821 32	786	786	518 97	13
Atchison, Topeka and Santa Fé .....	1,784,335 60	852.3	1,190.3	873 56	8
Chicago, Rock Island and Pacific .....	3,567,180 10	1,175.1	1,273.6	1,456 76	1
Iowa Falls and Sioux City.....	108,515 12	183.7	183.7	295 09	15
Winona and Saint Peter.....	461,057 94	385.8	456	547 70	12
Saint Paul and Duluth .....	304,933 85	169	169	902 18	6
Chicago, Milwaukee and Saint Paul .....	2,771,943 31	1,709.3	2,404.9	673 75	10
* Northern Pacific.....	483,454 12	.....	721	670 53	11
	23,026,805 80	11,020.76	13,340.06		
Average for two years .....				945 23	

\* Northern Pacific for one year ending June 30, 1880.

From this table it will be seen that five of the fifteen companies named have expended from 20 to 50 per cent. more than the average amount, viz: the Chicago, Rock Island and Pacific, the Union Pacific, the Sioux City and Pacific, the Saint Louis, Iron Mountain and Southern, and the Texas and Pacific; while the remaining ten companies have expended from 5 to 60 per cent. less than the average—the Central Pacific and the Atchison, Topeka and Santa Fé expenditures being but about 7 per cent. below the average. The five roads first named expended \$11,574,510 on 8,590 miles one year, equal to an average of \$1,347.46 per mile; while the ten roads last named expended \$11,452,295 on 15,771 miles one year, equal to an average of but \$732.50 per mile. These figures are suggestive, especially in their bearing upon results, net earnings, dividends, and other questions.

The principal properties included in the special inspections made by this office have been those of the Union Pacific, Central Pacific, Southern Pacific, Atlantic and Pacific, and Northern Pacific Companies, and of lines connecting therewith, aggregating over 6,000 miles of railroad. On all of these properties "extension" and "improvement" have been the order of the day. Branch lines have been and are in process of construction, and still more are projected. Steel rails are being largely substituted for iron rails; ties are kept well renewed; grades are being reduced and bad locations remedied; trestles are being filled, and road-beds widened and ballasted; shops and station-houses are being enlarged; new and improved machinery has been purchased; equipment has been increased so as to meet the requirements of traffic. And in all this, while economy has been studied, safety of travel and public convenience have not been overlooked. At no previous time in the history of these great enterprises has the value of the properties been so assured or their prospects been so good for benefiting their owners, paying their debts, and serving the people better and more cheaply. As the Great West, and the Northwest, the Pacific Slope and the Southwest fill up with settlers there must come business enough for each one of these great trunk lines—Northern, Central, and Southern—without invading each other's territory or grasping for business in any way other than by that of legitimate and actual competition.

The particular property of each of these companies will be referred to, however, in another part of the report and in greater detail.

#### ACCIDENTS ON RAILROADS AND THEIR PREVENTION.

Before dismissing general reference to the inspections of railroad property made by this office, attention is invited to the remarks of Mr. Nichols, the railroad engineer, in regard to the important subject of railroad accidents and their prevention.

The time has undoubtedly arrived when the National government should take some action looking to the safety of life and property on railroads. Although there have been no accidents of a serious character on the Pacific Railroads during the year, or, as a matter of fact, for many years, every precaution should be taken by the government to prevent their occurrence.

The Hon. Isaac F. Redfield, chief justice of Vermont, writing in 1873, says:

If we refer to the numerous acts of Congress for the security of property and life connected with commerce, and for its encouragement and protection in all its relations and departments, and reflect how almost exclusively the entire subject is brought under the supervision and control of Congress, we shall find slight ground to question that such supervision will be extended to the inter-State commerce upon railways,



and that it may rightfully be so extended, since there seems to be no other mode of rendering this inter-State railway traffic safe and just to passengers and the owners of freight, and at the same time reasonably remunerative to the companies.

The Supreme Court of the United States, in affirming the decree of the lower court in the case *Western Union Telegraph Company v. Pensacola Telegraph Company* (96 Supreme Court Reports 8), used the following language:

Congress has power "to regulate commerce with foreign nations and among the several States" (Const. art. 1, sect. 8, par. 3); and "to establish post-offices and post-roads" (*id.*, par. 7). The Constitution of the United States and the laws made in pursuance thereof are the supreme law of the land (art. 6, paragraph 2). A law of Congress made in pursuance of the Constitution, suspends or overrules all State statutes with which it is in conflict.

Since the case of *Gibbons v. Ogden* (9 Wheat., 1), it has never been doubted that commercial intercourse is an element of commerce which comes within the regulating power of Congress. Post-offices and post-roads are established to facilitate the transmission of intelligence. Both commerce and the postal service are placed within the power of Congress, because, being national in their operation, they should be under the protecting care of the national government.

The powers thus granted are not confined to the instrumentalities of commerce or the postal service known or in use when the constitution was adopted, but they keep pace with the progress of the country, and adapt themselves to the new developments of time and circumstances. They extend from the horse with its rider to the stage-coach, from the sailing vessel to the steamboat, from the coach and the steamboat to the railroad, and from the railroad to the telegraph, as these new agencies are successively brought into use to meet the demands of increasing population and wealth. They were intended for the government of the business to which they relate, at all times, and under all circumstances. As they were intrusted to the general government for the good of the nation, it is not only the right, but the duty of Congress to see to it, that intercourse among the States and the transmission of intelligence are not obstructed or unnecessarily encumbered by State legislation.

Professor Geo. L. Vose, writing on the subject of "Bridge Disasters in America—The Cause and the Remedy," in the *Railroad Gazette* of July 2, 1880, says:

To conclude: Thirty bridges on an average break down in the United States every year. No system of inspection or control at present existing has been able to detect in advance the defects in these structures or to prevent the disasters. A system practicable, simple, and inexpensive can be had, which, if properly carried out, will insure in nearly all cases, if not all, the public safety. It lies with the public to say whether or not it will have such a system.

The *Railroad Gazette* of September 17, 1880, contains the following in an editorial on this subject:

The investigation of railroad accidents seems not likely soon to be undertaken by governmental authority, either state or national in this country, though if it could be done thoroughly and intelligently it would be very desirable. Even in cases where death has been caused by criminal negligence, there is very rarely any investigation which is of much value to those who are studying how best to avoid accidents. A coroner's inquest is only in very rare instances of any value whatever, and it does not even make the clear statement of the facts attending an accident which would enable a railroad man to form a judgment for himself, while in the nature of things it must be altogether an accident, if its judgment is worth anything. And in the comparatively infrequent cases when men have been tried in the courts on charges of having caused accidents by criminal negligence, if there has been any valuable investigation the record of it has usually not become public, or at least not accessible to railroad men, who would most profit by it.

Mr. Charles Francis Adams, jr., in his "Notes on Railroad Accidents," says in regard to this subject:

The lack of all reliable statistics as respects this wide field of inquiry has already been referred to. We have no trustworthy data. We do not know, with accuracy, even the number of miles of road operated; much less the number of passengers annually carried. \* \* \* The number of passengers annually carried on the roads of a few of the States is reported with more or less accuracy, and averaging these the result



would seem to indicate that there are certainly not more than 350,000,000 passengers annually carried on the roads of all the States. There is something barbarous about such an approximation, and it is disgraceful that at this late day we should in America be forced to estimate the passenger movement on our railroads in much the same way that we guess at the population of Africa. Such, however, is the case. We are in this respect far in the rear of civilized communities. Taking, however, 350,000,000 as a fair approximation to our present annual passenger movement it will be observed that it is as nearly as may be half that of Great Britain. In Great Britain in 1878, there were 1,200 injuries to passengers from accidents to trains, and 675 in 1877. The average of the last eight years has been 1,226. If, therefore, the approximation of 800 a year for America is at all near the truth the percentage would seem to be considerably larger than that arrived at from the statistics of Great Britain. Meanwhile it is to be noted that while in Great Britain about 25 cases of injury are reported to each one of death, in America but four cases are reported to each death—a discrepancy which is extremely suggestive. Perhaps, however, the most valuable conclusion to be drawn from these figures is that in America we are as yet absolutely without any reliable railroad statistics on this subject at all.

The following statistical information in regard to *train accidents only*—omitting all others, and by which the majority of persons are killed and injured on railroads—is taken from the *Railroad Gazette*, of January 30, 1880, and although probably incomplete, is the best and most reliable that can be obtained.

Number of train accidents each month for seven years.

Months.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	Total.	Average.
January.....	178	108	121	60	147	75	113	812	116
February.....	133	90	211	91	56	67	88	736	105
March.....	112	88	122	109	58	49	61	599	85
April.....	101	59	60	56	69	46	50	441	63
May.....	79	89	54	64	46	50	37	419	60
June.....	90	83	61	52	49	56	64	455	65
July.....	90	64	73	79	53	74	81	494	71
August.....	150	73	114	78	98	75	79	667	95
September.....	106	89	116	106	84	76	78	655	94
October.....	88	81	88	103	82	61	104	607	87
November.....	76	82	87	96	83	68	86	578	82
December.....	80	74	84	88	66	63	69	524	75
Totals.....	1,283	980	1,201	982	891	740	910	6,987	998

Classification of train accidents for seven years.

Kind.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	Total.	Average.
Collisions.....	392	260	278	279	208	220	310	2,007	287
Derailments.....	815	654	840	655	581	481	557	4,583	655
Other accidents.....	76	66	83	48	42	39	43	397	56
Total.....	1,283	980	1,201	982	891	740	910	6,987	998

Number of persons—passengers and employes—killed and injured by train accidents.\*

	1873.	1874.	1875.	1876.	1877.	1878.	1879.	Total.	Average.
Killed.....	276	204	234	328	214	204	185	1,645	235
Injured.....	1,172	778	1,107	1,097	1,047	756	709	6,666	953
Total.....	1,448	982	1,341	1,425	1,261	960	894	8,311	1,187

\* Between January 1 and September 30, 1880, the returns of killed and wounded on the railways of Great Britain and Ireland show that 831 persons were killed and 4,791 injured, of which 82 of the killed were passengers and 506 of the wounded, the remainder being workmen in the employ of the railroads.

Number of train accidents resulting from defective road, track, or equipment.

Classification.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	Total.	Average.
Cattle on track .....	54	45	51	46	43	30	35	304	43
Broken rail .....	111	42	107	50	46	17	56	429	61
Loose rail .....	13	10	40	43	41	29	19	201	29
Broken truck .....	7	8	15	10	8	13	11	72	10
Broken axle .....	31	18	44	40	52	20	21	226	32
Broken wheel .....	21	5	12	22	53	20	26	139	20
Broken tire .....			9		1		3	13	2
Broken bridge .....	11	22	26	20	21	21	17	138	20
Boiler explosions .....	16	14	26	19	15	11	17	118	17
Broken parallel or connecting rod .....	11	8	19	7	13	11	15	84	12
Cars burned while running.	2	16	10	11	7	13	4	63	9
Failure of coupling .....	8	7	3	1	1	4	2	26	4
Totals .....	285	201	302	260	281	189	226	1,813	259

Number of train accidents resulting from defective management or discipline.

Character.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	Total.	Average.
Rear collisions .....	187	131	141	159	159	142	206	1,125	161
Butting collisions .....	102	87	104	94	96	70	86	639	91
Crossing collisions .....	31	19	18	15	18	7	17	120	17
Misplaced switch .....	72	67	81	89	70	48	80	507	72
Unexplained .....	387	241	237	196	177	176	194	1,608	230
Total .....	779	545	581	553	515	443	583	3,999	571

From other sources the following approximate statement of the number of passengers carried and of the number of passengers carried one mile is made up, viz:

Year.	Miles operated.	Passengers carried.	Passengers carried one mile.
1873 .....	70,000	320,000,000	8,800,000,000
1874 .....	72,000	335,000,000	9,000,000,000
1875 .....	74,000	340,000,000	9,000,000,000
1876 .....	77,000	380,000,000	10,900,000,000
1877 .....	79,000	335,000,000	8,800,000,000
1878 .....	82,000	325,000,000	8,300,000,000
1879 .....	87,000	350,000,000	9,200,000,000
Total seven years .....	541,000	2,385,000,000	64,000,000,000
Average per year .....	77,286	340,714,286	9,142,857,142

These figures and tables, although approximate merely, show that of the passengers who travel by railroad in the United States, including employes on trains, in every million and one-half carried, *one* is killed and *four* are injured; or, to state it differently, that in EVERY FORTY MILLION persons CARRIED ONE MILE, ONE IS KILLED and FOUR ARE INJURED!

The figures also show that about *one-fourth* of the train accidents are the result of *defects in property*, while *more than one-half* of them are the result of *carelessness, lack of discipline, or defective management*.

The Hon. James A. Garfield, of Ohio, introduced in the House of Representatives, on February 1, 1877, a bill entitled "A bill to provide for a more thorough investigation of accidents upon railroads." The bill authorized and requested the President to appoint a board of three commissioners from the Engineer Corps of the Army to inquire into the number, causes, and means of prevention of accidents on railroads in the United States, and the number of persons killed or injured; and made it the duty of the commissioners to investigate accidents of an

unusual character on railroads and to make a special report thereon. The board was also required to forward to the Secretary of the Treasury (!) at the close of each year a general report upon the subject of accidents upon railroads in the United States, the same to be submitted to Congress. The bill did not come up at that session, but was brought forward again in 1878. It was not reached, however, and went over as unfinished business.

The Hon. William W. Eaton, Senator from Connecticut, on December 2, 1879, introduced a bill "to protect life and property and to prevent accidents and delay to the mails on railroads and steamboats operated by steam power within the jurisdiction of the United States of America," and which is now pending. The main feature of the bill is, that railroad and steamboat companies doing interstate business are required to adopt and put into actual and continued use such inventions and improvements as may contribute to the comfort, security, and safety of passengers, &c., and to carry this into effect the bill provides for the appointment by the President of the United States of a board of five commissioners to determine and authorize (!) the use of such inventions, as well as to determine (!) the compensation or royalty to be paid for the same.

In view of the fact that much heavier locomotives and freight cars of much greater capacity are being introduced and used on Western as well as on Eastern railroads, it is of paramount importance that the factor of safety for all bridges keep pace with increased loads. In this particular the remarks of the engineer in his report on defective bridge structures are worthy of consideration.

This whole subject of "Accidents—their causes and remedy" is entitled to an early consideration by Congress. Three terrible disasters, of but recent occurrence, namely those of the Tay bridge in Scotland and the May's Landing and Pittsburgh yard collisions in this country, the first owing to defective structure, the second owing to defective equipment, and the third owing to defective management or discipline, urge careful and considerate action by the law-making power. But any law which omits some requirement for independent and untrammelled investigation, for thorough inspection of bridges, equipment, and signals, as well as complete statistical information, must necessarily fail to accomplish the main object in view, namely; assured safety to life and property on railroad trains.

#### CONTINUED IMPROVEMENT IN THE BUSINESS OF RAILROADS.

Not only as regards the railroads of the United States as a whole, but more particularly as to those in which the government is interested as creditor or grantor, has there been a surprising continuance of prosperity.

For the calendar year 1879, as compared with 1878, the gross earnings of nearly all the railroads in the United States show an increase of \$40,000,000, or about *eight per cent.*; the working expenses show an increase of \$7,500,000, or about *two and one-half per cent.*; and the net earnings show an increase of \$32,500,000, or more than *seventeen per cent.*; while the increased mileage has been about *six per cent.*, or nearly 4,800 miles. (Appendix T.)

A noticeable feature of this increased business is that it has occurred nearly altogether on the railroads of the Middle, Western, and South-western States, the business of those in the Pacific, New England, and Southern States not having materially improved.

In Appendix M of my report for last year the passenger and freight business of a certain number of railroads east of the Mississippi and that

of another certain number of railroads wholly or partially west of the Mississippi, aggregating some 12,000 miles each, were tabulated for the years 1873 to 1878 inclusive, the results shown being stated on page 6 of the report. These tables have been corrected and continued in this report. (Appendix S.) The following is a comparative statement for the calendar years 1879 and 1878 made up therefrom:

*Comparative statement of business of certain railroads for 1878 and 1879. (See Appendix S.)*

Items.	Western, or certain railroads wholly or partially west of the Mississippi River.			
	1879.	1878.	Increase.	Decrease.
Miles operated.....		47	872	
Passengers carried.....		00	332, 000	
Passengers carried one mile.....		00	72, 744, 000	
Passenger earnings.....		00	\$1, 088, 000	
Rate per passenger per mile.....	1.	1.		0.13 cents.
Tons of freight carried.....		00	2, 251, 000	
Tons of freight carried one mile.....	4,	2,	980, 971, 000	
Freight earnings.....	00	00	\$6, 046, 000	
Rate per ton of freight per mile.....	1.	1.		0.26 cents.
Gross earnings.....	\$95, 772, 000	\$89, 031, 000	\$6, 741, 000	
Operating expenses.....	\$49, 848, 000	\$44, 974, 000	\$4, 874, 000	
Net earnings.....	\$45, 924, 000	\$44, 057, 000	\$1, 867, 000	

Items.	Eastern, or certain railroads east of the Mississippi River.			
	1879.	1878.	Increase.	Decrease.
Miles operated.....	6	54	358	
Passengers carried.....	0	8	4, 634, 000	
Passengers carried one mile.....	0	1, 84	90, 750, 000	
Passenger earnings.....	0	\$4	\$94, 000	
Rate per passenger per mile.....	0	2.		0.17 cents.
Tons of freight carried.....	0	4	18, 248, 000	
Tons of freight carried one mile.....	1	9, 46	2, 116, 190, 000	
Freight earnings.....	0	\$9	\$6, 488, 000	
Rate per ton of freight per mile.....		1.		0.14 cents.
Gross earnings.....	\$164, 147, 000	\$153, 490, 000	\$10, 657, 000	
Operating expenses.....	\$101, 362, 000	\$90, 984, 000	\$10, 378, 000	
Net earnings.....	\$62, 785, 000	\$62, 506, 000	\$279, 000	

This statement is very suggestive on many points.

First. That while the ratio of *operating expenses* to *gross earnings* on these Western roads is, say, 52 per cent., and on the Eastern roads 62 per cent., the Eastern roads have done three times the work, at only double the cost.

Second. That both these Eastern and Western railroads have reduced their rate per ton per mile *fourteen per cent.*, and passenger rates about *seven per cent.*, on an average.

Third. That the *average haul*, both of freight and passengers, on the Western, is nearly double that on the Eastern roads.

Fourth. That the average rate *per ton per mile* on the Eastern roads is down to the very low price of *less than nine-tenths of a cent*, and the rate *per passenger per mile* to *two and one-eighth cents*.

The course of business on the Union and Central Pacific Railroads for the eight years ending December 31, 1879, is shown in the following tabular statements. The statement showing the business of the Central Pacific is made up on a *currency basis*, in order to enable some com-

parison to be made with that of the Union Pacific and other roads, the greater portion of the business of the Central Pacific during the years prior to 1879 having been done in *coin*. A statement is also made, showing the course of business on the Kansas Pacific for the same period, from which it will be seen that this road is doing much better than heretofore.

*Business of the Union Pacific Railroad for eight calendar years, 1872 to 1879, inclusive.*

Items.	1872.	1873.	1874.	1875.
Miles operated.....	1, 038	1, 038	1, 038	1, 038
Passengers carried.....	165, 688	174, 894	188, 877	209, 831
Passengers carried 1 mile.....	80, 063, 871	95, 709, 054	105, 138, 206	132, 591, 343
Passenger earnings.....	\$3, 370, 312	\$3, 887, 204	\$3, 952, 858	\$4, 346, 014
Rate per passenger per mile.....	4. 18 cents.	4. 06 cents.	3. 76 cents.	3. 28 cents.
Tons of freight carried*.....	378, 650	482, 484	482, 806	501, 409
Tons of freight carried 1 mile*.....	178, 145, 755	223, 361, 542	262, 238, 837	269, 414, 989
Freight earnings*.....	\$4, 337, 152	\$5, 028, 560	\$5, 136, 501	\$5, 993, 075
Rate per ton of freight per mile.....	2. 43 cents.	2. 25 cents.	1. 96 cents.	2. 22 cents.
Gross earnings.....	\$8, 461, 338	\$9, 775, 757	\$10, 031, 650	\$11, 345, 395
Operating expenses.....	4, 369, 306	4, 484, 514	4, 326, 474	4, 333, 611
Net earnings.....	4, 092, 032	5, 291, 243	5, 705, 176	7, 011, 784

Items.	1876.	1877.	1878.	1879.
Miles operated.....	1, 038	1, 038	1, 038	1, 038
Passengers carried.....	202, 648	185, 691	188, 315	217, 100
Passengers carried 1 mile.....	128, 032, 924	107, 833, 371	96, 304, 250	100, 151, 148
Passenger earnings.....	\$4, 307, 602	\$3, 599, 757	\$3, 190, 370	\$3, 207, 910
Rate per passenger per mile.....	3. 36 cents.	3. 34 cents.	3. 31 cents.	3. 20 cents.
Tons of freight carried*.....	629, 947	716, 113	844, 019	992, 881
Tons of freight carried 1 mile*.....	292, 002, 076	334, 644, 870	366, 014, 081	436, 054, 149
Freight earnings*.....	\$6, 583, 864	\$7, 218, 856	\$7, 700, 048	\$7, 826, 464
Rate per ton of freight per mile.....	2. 26 cents.	2. 16 cents.	2. 10 cents.	1. 79 cents.
Gross earnings.....	\$12, 176, 620	\$12, 171, 520	\$12, 320, 365	\$12, 335, 129
Operating expenses.....	4, 557, 972	4, 775, 135	4, 575, 679	4, 609, 554
Net earnings.....	7, 618, 648	7, 396, 385	7, 744, 686	7, 725, 575

*Business of the Central Pacific Railroad for eight calendar years, 1872 to 1879, inclusive, at currency values.*

Items.	1872.	1873.	1874.	1875.
Miles operated.....	1, 176	1, 254	1, 266	1, 349
Passengers carried, rail.....	588, 833	658, 105	624, 449	673, 903
Passengers carried, ferry.....	2, 415, 141	2, 621, 976	3, 238, 280	4, 083, 411
Total passengers carried.....	3, 003, 974	3, 280, 171	3, 862, 729	4, 762, 314
Passengers carried 1 mile.....	100, 420, 618	120, 858, 673	134, 318, 662	168, 336, 348
Passenger earnings.....	\$4, 303, 782	\$4, 707, 301	\$4, 983, 617	\$5, 897, 942
Rate per passenger per mile.....	4.28 cents.	3.89 cents.	3.71 cents.	3.51 cents.
Tons of freight carried*.....	746, 153	809, 601	905, 304	923, 783
Tons of freight carried one mile*.....	190, 516, 507	203, 042, 384	242, 151, 312	272, 182, 415
Freight earnings*.....	\$7, 461, 233	\$8, 107, 602	\$8, 493, 311	\$9, 938, 304
Rate per ton of freight per mile.....	3.91 cents.	3.99 cents.	3.51 cents.	3.63 cents.
Gross earnings.....	\$12, 734, 730	\$13, 851, 489	\$14, 531, 355	\$17, 021, 016
Operating expenses†.....	6, 148, 912	6, 256, 100	6, 546, 809	8, 484, 998
Net earnings.....	6, 585, 818	7, 595, 389	7, 984, 546	8, 536, 018

\* Commercial; company's not included.

† Includes rentals and taxes.



*Business of Central Pacific Railroad for eight calendar years, &c.—Continued.*

Items.	1876.	1877.	1878.	1879.
Miles operated.....	1,424	1,906	2,119	2,319
Passengers carried, rail .....	789,702	1,158,935	1,224,586	1,279,418
Passengers carried, ferry .....	4,982,957	5,661,621	5,754,602	5,562,889
Total passengers carried.....	5,772,659	6,820,556	6,979,188	6,842,307
Passengers carried 1 mile.....	172,639,176	181,715,266	178,773,325	180,773,751
Passenger earnings .....	\$5,908,822	\$5,635,437	\$5,319,976	\$4,919,255
Rate per passenger per mile .....	3.42 cents.	3.10 cents.	2.98 cents.	2.72 cents.
Tons of freight carried*.....	1,114,085	1,048,779	1,389,944	1,490,555
Tons of freight carried 1 mile*.....	310,529,070	309,733,968	339,013,885	309,021,573
Freight earnings*.....	\$10,773,618	\$10,042,811	\$10,878,483	\$10,934,573
Rate per ton of freight per mile.....	3.47 cents.	3.24 cents.	3.21 cents.	2.74 cents.
Gross earnings.....	\$18,146,944	\$18,522,229	\$17,649,947	\$17,153,163
Operating expenses† .....	9,884,545	12,564,937	11,321,491	11,126,247
Net earnings .....	8,262,399	5,957,292	6,328,456	6,026,916

*Business of the Kansas Pacific Railway for eight calendar years, 1872 to 1879, inclusive.*

Items.	1872.	1873.	1874.	1875.
Miles operated.....	673	673	673	673
Passengers carried .....	179,182	173,651	188,935	123,203
Passengers carried 1 mile.....	20,664,369	23,589,686	22,025,044	19,292,049
Passenger earnings .....	\$1,172,624	\$1,242,206	\$1,111,706	\$933,491
Rate per passenger per mile .....	5.67 cents.	5.27 cents.	5.05 cents.	4.84 cents.
Tons of freight carried.....	348,966	263,405	247,203	251,064
Tons of freight carried 1 mile.....	72,366,337	61,987,443	62,474,805	72,119,554
Freight earnings.....	\$2,294,299	\$2,077,169	\$1,965,655	\$2,157,168
Rate per ton of freight per mile.....	3.17 cents.	3.35 cents.	3.15 cents.	2.99 cents.
Gross earnings.....	\$3,723,713	\$3,563,299	\$3,356,694	\$3,363,760
Operating expenses.....	2,423,833	2,244,417	1,731,804	1,983,182
Net earnings .....	1,299,880	1,318,882	1,624,890	1,380,578

Items.	1876.	1877.	1878.	1879.
Miles operated.....	673	673	673	673
Passengers carried .....	124,740	143,117	198,173	280,228
Passengers carried 1 mile.....	18,232,525	18,936,167	22,173,135	35,874,444
Passenger earnings .....	\$766,450	\$690,062	\$782,806	\$1,136,466
Rate per passenger per mile .....	4.20 cents.	3.64 cents.	3.52 cents.	3.17 cents.
Tons of freight carried.....	289,992	337,520	407,736	518,280
Tons of freight carried 1 mile.....	71,540,034	85,393,211	102,013,144	129,288,910
Freight earnings .....	\$1,968,218	\$2,115,630	\$2,495,652	\$3,091,684
Rate per ton of freight per mile.....	2.75 cents.	2.43 cents.	2.45 cents.	2.39 cents.
Gross earnings .....	\$3,000,801	\$3,284,734	\$3,610,224	\$4,063,301
Operating expenses.....	1,860,333	2,056,638	2,290,759	2,738,687
Net earnings .....	1,140,468	1,228,096	1,319,465	1,924,614

\* Commercial; company's not included.

† Includes rentals and taxes.

From these tables it will be seen that the passenger business of the Union and Central Pacific reached its maximum in 1875—the earnings aggregating \$10,243,956 in that year, and the passenger mileage 300,927,691, the average rate per mile being three and four-tenths cents. Since then the business has gradually decreased, until in 1879 the aggregate earnings were but \$8,127,165, the mileage but 280,924,899, and the average rate per mile two and eighty-nine one-hundredths cents.



The freight business, on the contrary, reached its maximum in 1879—the earnings of the roads from that source being \$18,761,037, the ton mileage being 835,075,722 (exclusive of company freight), and the average rate being two and one-quarter cents per ton per mile, as against \$15,931,379 of earnings and 541,597,404 tons carried one mile in 1875, when the average rate per ton per mile was nearly three (3) cents.

The business of the Sioux City and Pacific and Central Branch Union Pacific Railroads also continues to improve, and to such an extent that there will be an annual payment hereafter, from both of these roads, as “five per cent. of net earnings,” to be applied on the debt due the United States. The following statements show the course of business on these two roads:

*Sioux City and Pacific Railroad and leased lines.*

[Calendar years.]

	1875.	1876.	1877.	1878.	1879.
Miles operated .....	158	158	158	158	171
Gross earnings .....	\$311,719	\$376,515	\$383,110	\$414,901	\$479,722
Total expenses* .....	303,346	287,431	312,317	333,811	387,413
Net earnings .....	8,373	89,084	70,793	81,090	142,309

*Central Branch Union Pacific Railroad and leased lines.*

[Calendar years.]

	1875.	1876.	1877.	1878.	1879.
Miles operated .....	100	100	120	172	287
Gross earnings .....	\$115,718	\$172,853	\$239,437	\$324,954	\$397,964
Operating expenses .....	89,339	122,857	177,039	384,695	511,045
Net earnings .....	26,379	49,996	62,398	240,259	386,919

The business of the “Central Branch” as well as that of other roads has been materially affected this year by reason of the severe drought in Kansas west of the one hundredth meridian.

Among the other railroads, the operations of which have been reported to this office, are the Southern Pacific; the Northern Pacific; the Saint Louis and San Francisco (successor to the Atlantic and Pacific in Missouri); the Oregon and California, and Oregon Central; the Atchison, Topeka and Santa Fé; the Missouri, Kansas, and Texas; the Saint Louis, Iron Mountain and Southern; the Missouri Pacific; the Kansas City, Lawrence and Southern; the Little Rock and Fort Smith; the Memphis and Little Rock; the Chicago, Rock Island and Pacific; the Iowa Falls and Sioux City and Dubuque and Sioux City (operated by the Illinois Central); the Cedar Rapids and Missouri River and the Winona and Saint Peter (operated by the Chicago and Northwestern; the Chicago, Milwaukee and Saint Paul; the Saint Paul and Duluth; the Vicksburg, Shreveport and Pacific; and the Texas and Pacific.

With the exception of the Oregon railroads, business for 1879, and also that of the current year, has largely increased on nearly all of the railroads enumerated; more notably on the Atchison, Topeka and Santa Fé; the Saint Louis, Iron Mountain and Southern; the Saint Louis and San Francisco; the Missouri, Kansas and Texas; the Little Rock and Fort Smith; and the Vicksburg, Shreveport and Pacific; the details of which are given in Table No. 11 of this report.

\* Including taxes and new construction and equipment.

Some of the railroad companies whose roads are included in the act creating the bureau have neglected and refused to furnish the reports called for. Among them are the Burlington and Missouri River Railroad Company in Nebraska; the Chicago, Burlington and Quincy Railroad Company; the Hannibal and Saint Joseph Railroad Company; the Chicago, Saint Paul, Minneapolis and Omaha Railway Company; and the Saint Paul, Minneapolis and Manitoba Railway Company; all of which have received valuable grants from the United States. Some other process than a suit for the penalty prescribed is desirable, as the time within which such suits could be determined would probably extend over some years. If patents for lands were refused to such companies as do not comply with the law, it would correspond with the law in regard to companies who fail to pay the expenses of commissioners, engineers, and other agents appointed to examine railroads, and might be effective.

CONDITION OF THE BOND AND INTEREST ACCOUNTS.

The public debt statement issued by the Treasury Department July 1, 1880, shows the condition of the accounts with the several Pacific Railroad companies so far as regards moneys which have been actually covered into their credit, but takes no account of moneys in the sinking-fund held by the Treasurer of the United States or of the compensation for services performed, but not at that time settled by the accounting officers. The following extracts from the statement are here given :

Name of railway.	Principal outstanding.	Interest accrued and not yet paid.	Interest paid by the United States.	Interest repaid by companies.		Balance of interest paid by the United States.
				By transportation service.	By cash payments: 5 per cent. net earnings.	
Central Pacific.....	\$25,885,120 00	\$776,553 60	\$18,016,680 07	\$3,200,389 64	\$648,271 96	\$14,168,018 47
Kansas Pacific.....	6,303,000 00	189,090 00	4,805,703 09	2,447,397 28	.....	2,358,305 81
Union Pacific.....	27,236,512 00	816,095 36	19,238,182 89	7,804,484 37	.....	11,432,698 52
Central Branch U. P. ...	1,600,000 00	48,000 00	1,213,808 26	47,621 69	6,926 91	1,159,239 06
Western Pacific.....	1,970,560 00	50,116 80	1,254,431 34	9,367 00	.....	1,245,064 34
Sioux City and Pacific.	1,628,320 00	48,849 60	1,122,350 29	104,632 57	.....	1,016,817 72
Totals.....	64,623,512 00	1,938,705 36	45,651,153 94	13,615,292 55	655,198 87	31,380,664 52

As regards the debt owing to the United States by all of the subsidized Pacific Railroads—

Appendix O of this report shows the following:	
Total debt, principal and interest, to June 30, 1880.....	\$112,213,373 30
Total credits, transportation and money in the Treasury, to June 30, 1880 .....	15,385,261 13
Balance yet owing to the United States .....	\$96,828,112 17

CONDITION OF THE TRANSPORTATION ACCOUNTS.

Appendix P of this report shows in detail the condition of these accounts with each of the indebted Pacific Railroads, from which the following summary is made:

Transportation services as per companies' books .....	\$20,546,366 57
Transportation services on roads not subsidized .....	1,398,292 15
Transportation services on subsidized roads .....	19,448,074 42

* One-half paid to companies prior to 1873.....	\$4,295,187 98
One-half retained and applied prior to 1873.....	4,204,471 03
	<hr/>
Amount settled for prior to act of 1873 .....	\$8,499,659 01
	<hr/>
Remainder, applicable to "repayment of interest," to the payment of "five per centum of net earnings," to the payment of "requirement for sinking-fund" and payable to the companies, respectively .....	10,948,415 41
One-half applicable to repayment of interest.....	\$5,474,207 72
Of the "other half" there is applicable—	
To payment of "five per cent. of net earnings" .....	4,354,821 25
To payment of "sinking-fund requirement" .....	1,081,391 64
To payment of "Sioux City and Pacific Company" ..	37,994 80
	<hr/>
Total as above.....	10,948,415 41

Of the transportation on *roads not subsidized*, amounting to \$1,398,292.15, there is payable on account of "Five per cent. of net earnings"—equivalent to a cash payment by the companies—\$738,151.58; payable on account of "requirement for sinking-fund"—Union Pacific, \$23,073.73; and payable to the companies—Kansas Pacific (now Union Pacific), \$621,844.11, and Sioux City and Pacific, \$15,222.73, together amounting to \$637,066.84.

The cash payments which have been required from the companies in addition to the retention of the entire compensation for services are as follows:

Central Pacific .....	\$1,058,677 79
Central Branch Union Pacific.....	1,953 77
	<hr/>
Total.....	\$1,060,631 56

The Central Pacific Railroad Company has deposited the above amount in the Treasury, viz: \$1,058,677.79, of which the last payments, \$229,076.32, have been deposited under protest against their investment in "currency sixes" at 29 or 30 per cent. premium.

#### CONDITION OF THE "FIVE PER CENTUM OF NET EARNINGS" ACCOUNTS.

As shown in Appendix P, the total amount of "five per centum of net earnings" of the subsidized Pacific Railroads to December 31, 1879, is \$5,355,150.08.

In my last annual report (page 19) the total amount of this account to December 31, 1878, was stated as \$4,716,265.23.

The increase is accounted for in the following manner, viz:

Union Pacific, calendar year 1879 .....	\$306,583 22
Central Pacific, calendar year 1879 .....	179,912 78
Kansas Pacific, calendar year 1879 .....	†70,000 00
Central Branch Union Pacific, calendar year 1879.....	19,346 96
Sioux City and Pacific, calendar year 1879 .....	†4,000 00
	<hr/>
Total for the year 1879 .....	579,842 96
Kansas Pacific, for total period to December 31, 1878, in addition to last year's estimate .....	52,114 93
Central Branch Union Pacific, for 1878, as agreed upon in suit in Court of Claims .....	6,926 91
	<hr/>
Total additional 5 per cent. of net earnings .....	\$638,884 85

\* This amount and the following one vary from last year's statement owing to payments to and receipts from some of the companies.

† Estimated.

Detailed statements of the earnings and expenses of the Kansas Pacific Railway for the ten years ending November 1, 1878, are given in Appendix Q; also, of the Sioux City and Pacific Railroad from November 1, 1874, to June 30, 1880; and a general statement of the earnings and expenses of the Central Branch Union Pacific for 1878.

As to the Kansas Pacific Railway, the first detailed statement, marked *a*, showed "net earnings" of \$6,708,314.81, upon which \$335,415.75—"five per cent. of net earnings"—was payable, being for those years only in which there was a surplus remaining after the payment of interest on first-mortgage bonds. The years 1870 and 1871 having no surplus of that kind, no "five per cent." was payable for those years.

The correctness of the apportionment of "construction" and other items being doubted somewhat, a re-examination of that portion of the expenditures was made with results as shown in statement marked *b*, which, being used in place of the amounts as given in statement *a*, showed "net earnings" for the same period, amounting to \$6,818,044.03, upon which "five per centum" was \$340,902.20.

This amount, however, did not appear to give the United States a fair and equitable proportion of the business, although it was reached in strict compliance with the principles laid down by the Supreme Court in what are known as the "five per cent." cases; that is, a *pro rata* according to mileage was made the basis of apportionment, no actual accounts having been kept for the years prior to November, 1876.

From November 21, 1876, when the road passed into the hands of receivers, to December 31, 1879, separate and correct accounts *were kept* for each mortgage division operated. Upon those accounts a statement was prepared in this office, and is given in appendix Q, statement marked *d*, from which it appeared that the divisions of the road upon which the United States subsidy bonds were issued, the first and second mortgage divisions—394 miles from Kansas City westward—were entitled to, as they had actually earned during a period of more than three years, forty-one and six one-hundredths (41.06) per cent. on and over the amount found upon the mileage proportion of business.

A statement, *e*, of the appendix, was therefore prepared on the basis found by statement *d*, by which it appears that the "net earnings" of the subsidized 394 miles of the Kansas Pacific Railway for the ten years amounts to \$9,467,317.26, of which, however, \$425,017.27, being the net earnings for 1870 and 1871, are not subject to the payment of "five per cent.," leaving the net amount subject to "five per cent." \$9,042,299.99, five per cent. of which is \$452,114.99.

Prior to 1879, the Sioux City and Pacific Railroad had not realized any net earnings which were subject to the payment of "five per cent.," as will be seen by the detailed statement given in appendix Q, the interest payment on first mortgage bonds being in excess of the amount of net earnings up to that time.

The statement given in appendix Q, showing the earnings and expenses of the Central Branch Union Pacific Railroad for the calendar year 1878, gives net earnings for the 100 miles of subsidized road as \$138,538.27, "five per cent." of which is \$6,926.91, which amount was deducted from the amount of the judgment of the Court of Claims in a suit brought by the company—\$25,521.04—the company being paid the difference, \$18,594.13, in money.

#### CONDITION OF THE SINKING-FUND ACCOUNTS.

Appendix R of this report shows in detail the condition of the sinking funds of the Union and Central Pacific companies respectively held by

the Treasurer of the United States under the act of Congress approved May 7, 1878.

The accounts of these two companies have been examined in order to arrive at a settlement under the law, for the periods of six months—July to December, 1878—and of twelve months from January to December, inclusive, 1879. The following statement shows the amount of compensation for services rendered which is applicable to the sinking-funds.

Period.	Union Pacific.	Central Pacific.
July 1 to December 31, 1878.....	\$294, 158 10	\$123, 852 02
January 1 to December 31, 1879.....	574, 844 00	226, 378 36
Total .....	869, 002 10	350, 230 38

The amount of cash or additional payment required from both companies for the sinking-funds is as follows :

Period.	Union Pacific.	Central Pacific.
July 1 to December 31, 1878.....	\$158, 818 37	\$181, 329 51
January 1 to December 31, 1879.....	76, 644 89	266, 894 42
Total .....	235, 463 26	448, 223 93
Grand total .....	1, 104, 465 36	798, 454 31

The amount in the sinking-fund June 30, 1880, as shown by report furnished this office by the Treasury Department, was as follows, viz :

Union Pacific Company.....	\$545, 282 34
Central Pacific Company .....	569, 487 37
Total .....	1, 114, 769 71

The investment of these sinking-funds is reported as follows :

Character of bonds.	Union Pacific.	Central Pacific.
Funded loan of 1881, 5 per cent.....	\$256, 450 00	\$194, 600 00
Funded loan of 1907, 4 per cent.....	31, 950 00	156, 300 00
Currency sixes, 6 per cent .....	192, 000 00	119, 000 00
Principal .....	480, 400 00	512, 200 00
Premium paid .....	64, 853 43	57, 283 73
Total cost.....	545, 253 43	569, 483 73

The amount of premium paid is so large that the companies have protested against investment at such heavy cost. The “currency sixes” purchased have been as follows :

	Premium.
\$42, 000, at 125 .....	\$10, 500
33, 000, at 126.....	8, 880
70, 000, at 128½.....	19, 960
166, 000, at 129½.....	48, 970
311, 000 (averaging nearly) 128.30.....	88, 000

The honorable the Secretary of the Treasury, in December, 1879, and again in June, 1880, informed Congress of the difficulties which lay in the way of a just and profitable investment of these moneys, the funded



loan of 1881, five per cent. bonds, having so short a time to run; but the session closed without any action being taken, and the investment was made in "currency sixes," at that large premium, as a better investment than was offered by any other United States bond, to which the law limited the Secretary of the Treasury. The first mortgage bonds of the company—first payable from the sinking fund—are undoubtedly the best bond investment for this fund; but better than any investment in bonds, which is always more or less liable to influence the market value of the securities sought, the amounts as covered in to these sinking funds should be credited with interest at, say, six (6) per cent. per annum payable semi-annually. This plan would make the investment *secure*, would avoid all question of market influence, and would pay the companies a sum on the investment much nearer that which they could obtain by investing the moneys themselves. These sinking fund moneys belong to the companies entirely, the United States bonds having no lien whatever upon the one-half of transportation compensation devoted to this purpose, *only on the other half*, which is, and has been, regularly applied to the payment of the bonds and interest under act of July 2, 1864 (sec. 5, 13 U. S. Statutes, 359).

In my last annual report, page 21, it was shown that, owing to delays in settlement, large sums due these companies and payable into the sinking-funds remained uncredited, and of course were unavailable for investment, to the great detriment of their interest account. Excepting compensation for mail-service, it is quite within bounds to say that the average time required for compensation for service to be passed to the credit of the companies is not less than one year! It is stated on reliable authority that on the 30th of June, 1880, transportation accounts of the Union Pacific Railway Company to the amount of over \$800,000 for services performed prior to that date, were somewhere in transit to the accounting officers, having left the company's hands months and perhaps years before. With a view to obtaining correct information as to this matter, request was made of the several departments of the government, on October 9, 1880, for a statement of the amount of accounts of the Pacific Railroad Companies for services prior to July 1, 1880, then held by the several bureaus and departments. In reply to these requests reports have been received from all departments except that of the Post-Office and those of the chief quartermasters at Saint Louis, Omaha, San Francisco, and Leavenworth.

The amount of transportation rendered by the companies as shown in

Appendix P, to December 31, 1879, is.....	\$20,846,366 57
Adding to this service for six months, to June 30, 1880, say.....	1,089,353 31

Makes total service performed .....	21,935,719 88
Less amount in controversy for mail service on Union Pacific, February, 1876, to June, 1880 .....	1,023,151 40

Approximate amount of total service to June 30, 1880.....	20,912,568 48
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Deduct—

Amount paid companies in money .....	\$4,295,187 98
Amount covered into the Treasury to June 30, 1880, as per debt statement.....	13,615,292 55
	<hr/> 17,910,480 53

Difference, accounts unsettled.....	3,002,067 95
Accounts held by departments and accounting officers October, 1880..	1,212,152 64

In the hands of administrative officers, chief quartermasters, quartermasters, &c.....	1,789,935 31
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Railroad companies generally manage to settle their accounts with each other within sixty days after the close of a month's business; many of them in a much shorter time than that. Among the accounts remaining in the accounting officers' hands unsettled, some are for service rendered in 1873, and some for service in 1876 and 1877. Even though these companies cannot be paid the money found due, that is not a valid reason why their accounts should remain unsettled.

#### DEPARTMENTAL CIRCULARS AFFECTING PACIFIC AND OTHER RAILROADS.

Appendix D, of this report, contains, among others, an important circular issued by the Treasury Department November 29, 1879, being in the nature of a notice to all government officers and employes that no money payments can be made to any of the Pacific Railroads which have been subsidized with bonds, but that orders for transportation must be obtained from the proper authority. The roads, their termini, and distances being given, no person can hereafter claim ignorance of the provisions of law, and the accounting officers of the Treasury disallow all payments made in contravention thereof. In regard to this circular there are two questions yet undecided by the Supreme Court: first, that although the Missouri River bridge at Omaha, and its approaches on both sides of the river, have been decided to be a part of the Union Pacific Railroad, it has not yet been determined whether the compensation for services over this portion of the road can be withheld, inasmuch as it has *not been subsidized* in any way; second, as to that portion of the Kansas Pacific extending from the 394th mile-post to Denver, Colo., the same question arises. A suit has been instituted by the company—Union Pacific Railway Company (consolidated) *vs.* United States (Court of Claims No. 12380)—to test this question in regard to that portion of the Kansas Pacific above referred to, and which it is hoped will be determined during the present term of the Supreme Court.

Another circular, given in the same appendix, was issued by the Treasury Department on June 24, 1880, in which the opinion of the Attorney-General, dated June 18, 1880, is published for the information of all concerned. This opinion relates to the retention of compensation due Pacific Railroad Companies for services rendered on roads owned, leased, *controlled*, or operated by them, as well as on roads which have been subsidized with bonds. All of these companies—the Union Pacific Railway Company, the Central Pacific Railroad Company, the Sioux City and Pacific Railroad Company, and the Central Branch Union Pacific Railroad Company—operate roads other than those subsidized, on which the government is entitled to transportation service in the same way as any private person is, that is, *by paying for it*, except in any special case, such as the California and Oregon road, on which troops and military supplies are to be transported free of charge when so required by the United States. A suit has been instituted in the Court of Claims—Central Branch Union Pacific Railroad Company *vs.* United States (No. 12381)—to recover the compensation for service on a leased line, withheld in accordance with the above-mentioned opinion. For the reason that the Supreme Court, in rendering its opinion in the Denver Pacific case (see page 172 of my last report), argued that as that company did not receive any bonds and was not liable for any debt of the Kansas Pacific Railway, compensation could not be withheld, it may be inferred, on the other hand, that as the companies which *did receive* bonds are *indebted* to the United States, therefore the right of retention applies to com-

pensation for any services rendered by them. But it is better that the question be judicially determined, and that by the court of last resort.

General Order No. 69, issued by order of General Sherman from the Adjutant-General's Office September 30, 1880, is given in the same appendix (D), but without the tables. This circular gives instructions and accompanying tables of land-grant and subsidized railroads, revised and corrected, for the guidance and information of Army officers and employés. With a view to aid the several departments of the government by giving the fullest information in this respect, Appendixes A, B, and C of this report have been carefully prepared and revised, and it is believed will be found to agree with the circular of the War Department in all material points.

#### FORMS OF REPORT NOW IN USE BY THIS OFFICE.

No important change has been made in the forms of report required by this office. Appendix E contains blanks of all the forms now used.

In the report of "train accidents," a classified list is required, giving "casualties" and "resulting expenses." Should any law be passed requiring statistical information to be furnished by railroad companies in regard to accidents, it is suggested that some such report as this would serve the purpose.

The classification of "operating expenses" has been changed merely as to their order. In the present form, the footing of the first five items gives amount ordinarily called "conducting transportation"; the next two give that of "maintenance of way"; the next two "motive power"; the next one "maintenance of cars"; and the following three items give "general expenses." With a view to arriving at some more accurate results in regard to cost of transportation of various kinds, the items composing this classification of "operating expenses" have been arranged in the following manner, namely:

Station expenses as "terminal."

Train service and supplies.....	} as dependent on "train mileage."
Casualties .....	
Motive power.....	
Service and supplies for cars.....	} as dependent on "car mileage."
Car service or rent of cars.....	
Maintenance of cars.....	
Maintenance of track.....	} as dependent on weight of engines, cars,
Fuel and water for locomotives.....	
Maintenance of roadway and buildings	} as "fixed expenses."
Insurance and losses by fire .....	
Taxes.....	
Administration and general expenses..	

These classifications and distinctions are based upon the methods adopted by Col. T. M. R. Talcott, general superintendent of the Richmond and Danville Railroad Company, in his annual reports, which are probably the most exact and scientific made by any company.

#### LAWS OF THE UNITED STATES AFFECTING RAILROADS AND TELEGRAPHS.

For convenience and for the information of all branches of the government it has been deemed advisable to publish certain laws affecting railroads and telegraphs. In my last annual report a compilation of the laws relating to the Pacific Railroad—the subsidized line and branches—was given as Appendix C, and has been found useful for reference.

Appendix F contains laws enacted by the Forty-sixth Congress which in any way affect the Pacific Railroad Companies.

Appendix G is a compilation of the laws relating to the Northern Pacific, Atlantic and Pacific, Texas and Pacific, Southern Pacific, and Oregon Railroad Companies. The charter acts of the Northern Pacific, Atlantic and Pacific, and Texas and Pacific Companies are included in the compilation, as well as all amendatory laws.

Appendix H is a compilation of the general laws of the United States affecting all railroads, and is composed principally of sections of the Revised Statutes.

Appendix I gives United States laws relating to the telegraph and telegraph companies. The complications and resulting litigation which have arisen between the Union Pacific Railway Company and the Western Union Telegraph Company have brought into considerable prominence all legislation in regard to telegraphs. The government being interested in the use of the telegraph, not only on the subsidized railroads, but all over the United States, these laws have been compiled for convenient reference. The circulars of the Post-Office Department, regulating charges for telegraphic service, have also been published with departmental circulars—Appendix D.

#### RECENT DECISIONS OF UNITED STATES COURTS.

Among the recent decisions of the Supreme Court of the United States affecting railroad companies, none has probably been so important as that rendered at the October term 1879, in the case of *Thomas et al. vs. West Jersey Railroad Company*—a case carried up on error from the circuit court of the eastern district of Pennsylvania. The decision of the Supreme Court is given in full in Appendix L.

In this case the lower court held that the contract entered into between Thomas and others and the Millville and Glassboro' Railroad Company, on October 8, 1863, whereby the railroad was leased for twenty years to Thomas and his partners, was void, such a contract being *ultra vires* of the company.

In affirming the judgment of the lower court, the Supreme Court says :

Where a corporation, like a railroad company, has granted to it by charter a franchise intended, in large measure, to be exercised for the public good, the due performance of those functions being the consideration of the public grant, any contract which disables the corporation from performing those functions [or] which undertakes without the consent of the State to transfer to others the rights and powers conferred by the charter, and to relieve the grantees of the burden which it imposes, is a violation of the contract with the State, and is void as against public policy.

The court further said in regard to the mention of "lessees," in an act of the legislature passed subsequently to the date of the contract :

The mention of the lessees no more implies a ratification of the contract of lease than the word "directors" would imply a disapproval of the contract. It is not by such an incidental use of the word "lessees" \* \* \* that a contract unauthorized by the charter and forbidden by public policy is to be made valid and ratified by the State.

In regard to the executed and unexecuted part of the contract, the court said :

In regard to corporations, the rule has been well laid down by Comstock, C. J., in *Parish v. Wheeler* (22 N. Y., 494), that the executed dealings of corporations must be allowed to stand for and against both parties when the plainest rules of good faith require it.

In regard to the rescinding and canceling of such illegal or unauthorized contracts and leases, the court held:

It was the duty of the company to rescind or abandon it at the earliest moment. This duty was independent of the clause in the contract which gave them the right to do it. Though they delayed its performance for several years, it was nevertheless a rightful act when it was done.

In this connection it may be stated that the charter acts of the several Pacific Railroad Companies—Union Pacific, Northern Pacific, Atlantic and Pacific, and Texas and Pacific—do not give any authority or power to lease away any of their property or franchises, or to acquire by lease from any other company or person the right to operate other property; and under the above decision of the Supreme Court any such leases should be rescinded and canceled. The telegraph, express, and other contracts in which the legitimate business of a railroad company has been leased to others, must apparently be canceled under this decision. There is a reasonable doubt, however, as to the sleeping-car and hotel-car business, the transportation of passengers being the legitimate business of the carrier, not the sleeping or eating conveniences which passengers may or may not require.

The opinion rendered by the circuit court of the United States for the district of Missouri in the telegraph case, *Western Union Telegraph Company v. Union Pacific Railway Company et al.*, is also given in Appendix L. The ultimate result of these suits cannot, in the light of the decision of the Supreme Court in the case of *Thomas v. West Jersey Railroad Company*, be otherwise than to place the telegraph and its business in the hands of the railway company, chartered by Congress for that especial purpose, and without any authority to avoid the operation of the same by lease or otherwise. The right of the United States to retain *all* of the compensation for services on the Union Pacific and *one-half* on the Kansas Pacific telegraph lines, and to 5 per cent. of the net earnings on the latter and 25 per cent. of the net earnings on the former, is believed to be obligatory upon the Union Pacific Railway Company or the lessees of the property.

Appendix M contains an important decision of the United States Court of Claims affecting all land-grant railroads on which the United States is entitled to transportation of troops and supplies "*free of toll or other charge.*" The case is that of the *Atchison, Topeka and Santa Fé Railroad Company v. The United States*. (Court of Claims No. 11471.) The case has been pending since December, 1876, and in itself involves \$176,499.64—the amount claimed by the company for transportation to November 30, 1876. Indirectly, however, the amount involved in the decision can only be counted by millions, as it covers government transportation for all future time on some forty or more railroads in the United States.

After a careful and elaborate discussion of the several questions presented, legal and technical, Mr. Justice Davis, who delivered the opinion, says:

In view of these different results, obtained from independent calculations, all approximating to an equal division of the gross earnings between the road and service, we can have no doubt that when Congress in 1879 authorized the payment of 50 per cent. of the approved bills of the land-grant roads, it intended to give its assent to the principle that 50 per cent. of the gross earnings is on the whole a just remuneration for the services and the profits which we have included in this computation.

The exact proportion between the cost of a road and the cost of its equipment varies in different roads and in the same roads at different times. But in view of the obvious necessity of establishing a fixed relation to govern current payments for work as done, unless the practice of refusing payment and sending claimants here is to be perpetuated, and in view of the manifest advantage of having that rate the same



with all the roads, Congress has practically agreed that, irrespective of the particular relations between the cost of a road and the cost of its equipment, 50 per cent. of its gross earnings is a fair compensation to the company for the actual cost of transportation and such part of the profits upon transportation as are earned by the company out of the government. We have, therefore, felt ourselves justified in finding as a fact that 50 per cent. of gross earnings is such a proper compensation.

The case has been appealed to the Supreme Court of the United States, and will, it is presumed, take its regular course upon the calendar; if so, a final decision may not be reached for some time. Meanwhile, many of the railroad companies are doubtless willing to accept 50 per cent. of their charge in settlement of their accounts against the government; but without an appropriation for the purpose, and authority for such settlements and payments to be made, the companies must bring suits in the Court of Claims—an expensive and tedious method, which should be avoided if possible. The question is again referred to in the “Recommendations for legislation” given in the latter part of this report.

#### THE CONSOLIDATION OF THE UNION, KANSAS, AND DENVER PACIFIC COMPANIES.

Appendix K of this report contains a copy of the articles of consolidation of the Union Pacific Railroad Company, the Kansas Pacific Railway Company, and the Denver Pacific Railway and Telegraph Company, entered into January 24, 1880, and filed in the Department of the Interior, in accordance with law, on January 26, 1880, from which date the articles take effect.

The name of the company formed by the consolidation is “The Union Pacific Railway Company.”

The consolidation was ratified by vote of the stockholders of the Union Pacific Railroad Company at Omaha, Nebr., August 18, 1880; by vote of the Denver Pacific stockholders at Denver, Colo., September 30, 1880; and by vote of the Kansas Pacific stockholders as shown in Appendix K.

The directors of the consolidated company are Fred L. Ames, Ezra H. Baker, Elisha Atkins, F. Gordon Dexter, Sidney Dillon, Russell Sage, Jay Gould, Solon Humphreys, David Dows, William L. Scott, Silas H. H. Clark, Thomas T. Eckert, John Sharp, Grenville M. Dodge, and Carlos S. Greeley, who hold office until March 9, 1881, when the annual meeting of stockholders will take place in the city of New York.

Capital stock of the consolidated company to the amount of \$46,226,150 had been issued up to the 30th of June, 1880; \$4,505,200 of the Union Pacific Railroad, \$29,550 of the Kansas Pacific Railway, and \$1,400 of the Denver Pacific Railway and Telegraph Companies' stock remaining unexchanged; the total amount of capital stock of the new company being \$50,762,300—the capital stock of the companies consolidating being replaced by an equal amount of par value of stock in the new consolidated company.

The officers of the Union Pacific Railroad Company were retained as officers of the Union Pacific Railway Company.

#### THE UNION PACIFIC RAILWAY COMPANY.

This Company is the successor, by consolidation January 26, 1880, to the Union Pacific Railroad Company, the Kansas Pacific Railway Company, and the Denver Pacific Railway and Telegraph Company.

The property acquired under the consolidation is operated in two divisions, known as “Union Division” and “Kansas Division,” which include all controlled branches and extensions. The total number of miles owned, and upon which the capital stock and funded debt are

based, are 1,814.848, of which 1,432.6225 miles have been subsidized with bonds, and 1,783.17 miles have been subsidized with lands.

The condition of this property, in which the government has an interest as creditor amounting to more than \$45,000,000, was found in August, 1880, the date of the last inspection, much improved, and great credit is due the manager and his assistants.

The report of the railroad engineer, pages 16 to 45, gives some interesting detail in regard to work done and in progress on both divisions of the main property; also, in regard to the Summit County Branch and the Utah and Northern (narrow gauge) controlled road.

The Union Division main line from Council Bluffs to Ogden is being rapidly brought up to a very high standard of condition; 641 of the 1,035 miles having been laid with steel rails to September 30, 1880, and contracts have been already made for steel rails enough to relay the remaining 394 miles during the coming year.

The railway buildings at Ogden, Utah, have not been improved, although the necessity of an entire remodeling and rebuilding of the passenger and freight depots at that point is more urgent than ever at this time, owing to the large business centering there.

At Denver, Colo., the company has built and is using a new and substantial stone freight-house, has put up a large and well-arranged coaling station with patent chutes, and has well under way a fine stone round-house. These extensive improvements, with the Grand Union Passenger Depot, in which this company is largely interested, will probably require an expenditure of over half a million dollars.

During the fiscal year new equipment has been purchased to an amount exceeding \$900,000, and over \$150,000 has been expended in new buildings and new construction, which amounts have been charged to construction and equipment accounts.

Aggregating the expenditures of the three old companies for the seven months from July, 1879, to January, 1880, inclusive, and adding thereto the five months' business of the Consolidated Company from February to June, inclusive, 1880, and comparing the results with the aggregate results of the operation of the three companies for the year ending June 30, 1879, it is found that "maintenance of way" for the year ending June 30, 1880, has cost \$2,815,185.30, as against \$2,308,440.95 for 1879, while "general expenses" have decreased \$60,757.81, indicating liberal improvements and economy under the consolidation.

The coal business of the company increased largely in the year 1879, the production at all the mines being 340,000 tons, as against 275,000 in 1878 and 275,000 in 1877. Several new shafts are being sunk, so that the production will be still more largely increased hereafter. The average cost of the coal at the mouth of the mines for the past three years has been \$1.08 per ton of 2,000 pounds. The sales of coal during 1879 were 125,662 tons, at an average price of \$5.65 per ton, being an increase of 23,422 tons sold over the quantity sold in 1878, at an average price of \$5.65 per ton, being a reduction from the average price of 1878 amounting to 48 cents per ton.

In regard to the lands of the consolidated company, the sales during the five months ending June 30, 1880, amounted to \$580,855.99. The amount of principal outstanding June 30, 1880, on account of "time sales" of lands was \$5,535,055.63, and at the same date the quantity of granted lands remaining unsold was nearly 16,000,000 acres. The exact quantity of lands of the three companies sold to the same date cannot be stated, but it approximates 3,300,000 acres, which have been sold for over \$13,000,000.



Among the assets of the company are large amounts of the stock and bonds of the branch lines and extensions. On June 30, 1878, these investments amounted to \$5,229,327.84; on June 30, 1879, they amounted to \$7,534,243.91, and on June 30, 1880, to \$15,338,453.94, which amounts represent their actual cost, as it appears on the books of the company. Since the date last named, the company has added largely to such investments, so that at this time they amount to more than \$20,000,000 of actual cost, and probably \$40,000,000 of face value. The business of these branch lines, in which the company holds so large an interest, is growing both in amount and profit. That of the Utah and Northern, and Denver, South Park and Pacific—both narrow-gauge roads running through mining country—is adding largely to the business of the main line. The accompanying list will give some idea of the kind and value of these properties.

*Branch roads controlled by the Union Pacific.*

Name of road.	Miles.	Name of road.	Miles.
Omaha and Republican Valley.....	132	Golden, Boulder and Caribou .....	6
Omaha, Niobrara and Black Hills.....	48	Kansas Central .....	119
Saint Joseph and Western.....	252	Central Branch Union Pacific and	
Marysville and Blue Valley.....	28	Leased Lines .....	308
Colorado Central.....	178	Julesburg Branch.....	150
Summit County.....	30	Saint Joseph Bridge .....	1
Utah and Northern .....	382	Utah Central .....	27
Carbondale .....	32	Utah Southern and extensions .....	242
Junction City and Fort Kearney.....	70	Utah Western .....	37
Solomon .....	57	Denver, South Park and Pacific .....	104
Salina and Southwestern .....	36	Wahsatch and Jordan Valley .....	31
Denver and Boulder Valley.....	27	Manhattan, Alma and Burlingame.....	58

This makes a total of 2,490 miles of branch and feeding lines, which added to the 1,815 miles of main property, gives 4,305 miles owned and controlled, although not all operated, by the company.

The policy of investing in these branch lines is undoubtedly the best for insuring a continuance of profitable business for the main line, and so long as the government has such a large interest as creditor it cannot but sanction and confirm such investments. If there is any way by which these branch properties could be merged in or consolidated with the main property it would be desirable, so that in any event or contingency the main property could not be deprived of these valuable feeders.

The receipts and expenditures of the company for the year ending June 30, 1880, have been summarized as follows:

RECEIPTS.

Earnings .....	\$20,517,806 82
Other income .....	1,890,634 34
Total receipts.....	22,408,441 16

EXPENDITURES.

Operating expenses and taxes .....	\$9,322,051 38
Interest on funded debt .....	3,070,404 75
New construction .....	145,460 09
New equipment .....	895,070 42
Other income expenditures .....	765,739 13
Total expenditures.....	14,198,725 77

Surplus available for interest due and unpaid, United States sinking-fund act, and other requirements—dividends, &c .....	\$8,209,715 39
Interest on funded debt due and unpaid (estimated)....	\$2,570,915 19
Requirements for the United States debt (estimated) ...	1,750,000 00
Dividends paid, nearly 5 per cent.....	2,489,134 50
	<hr/> 6,810,049 69
Net surplus over all expenditures and requirements.....	1,399,665 70

The statements from which the above summary has been taken are as follows:

*Union Pacific Railroad Company (1,039 miles).*

(Seven months ending January 31, 1880.)

#### RECEIPTS.

United States passenger, six months .....	\$108,163 76
United States freight, six months.....	254,442 83
United States mail, seven months.....	348,118 75
	<hr/> \$710,725 34
Commercial passenger.....	1,758,891 60
Commercial freight .....	*5,534,825 35
Express .....	182,110 36
	<hr/> 7,475,827 31
Miscellaneous earnings.....	94,008 67
	<hr/>
Total earnings .....	8,290,561 32
Discount and interest received.....	10,213 00
Interest on bonds held .....	215,940 00
Dividends on stocks held.....	139,216 50
Gains on investments.....	1,043 36
Miscellaneous (lands) .....	386,598 30
	<hr/>
Total income receipts .....	753,011 16
	<hr/>
Total receipts.....	9,033,572 48

#### EXPENDITURES.

Conducting transportation .....	\$620,587 01
Maintenance of way.....	624,054 63
Motive power.....	1,232,376 03
Maintenance of cars.....	256,649 02
General expenses (taxes included) .....	314,362 45
	<hr/>
Total operating expenses.....	\$3,048,029 14
Discount and interest .....	40,065 92
Interest on funded debt .....	1,689,531 00
Loss on investments.....	254 73
Dividends paid .....	1,102,350 00
Sinking-fund requirements (company's) .....	138,144 00
New construction .....	25,533 37
New equipment.....	66,555 26
Land expenses and taxes.....	113,826 43
	<hr/>
Total income expenses and dividends .....	3,176,260 71
	<hr/>
Total expenditures.....	6,224,289 85
	<hr/>
Surplus receipts over expenditures, seven months.....	2,809,282 63

\*Including \$422,924.06 "company freight."

## PAPERS ACCOMPANYING THE

*Kansas Pacific Railway Company (672 miles).*

(Seven months ending January 31, 1880.)

## RECEIPTS.

United States passengers, six months .....	\$15,733 10	
United States mail, seven months .....	50,796 78	
		\$66,529 88
Commercial passengers .....	674,936 61	
Commercial freight .....	*2,189,464 47	
		2,864,401 08
Express .....	85,808 86	
Company freight .....	111,160 54	
Miscellaneous .....	18,533 61	
		215,503 01
Total earnings .....		3,146,433 97
Other income, incidentals .....		26,552 83
Total receipts .....		3,172,986 80

## EXPENDITURES.

Conducting transportation .....	\$363,999 52	
Motive power .....	431,843 14	
Maintenance of cars .....	101,836 42	
Maintenance of way .....	705,644 08	
General expenses (including taxes) .....	238,248 22	
Total operating expenses .....		\$1,841,571 38
Discount and interest .....	27,175 89	
New construction .....	2,371 86	
New equipment .....	168,114 00	
Incidentals .....	182,587 28	
Total income expenses .....		380,249 03
Total expenditures .....		2,221,820 41
Surplus receipts over expenditures, seven months .....		951,166 39

*Denver Pacific Railway and Telegraph Company (106 miles).*

(Seven months ending January 31, 1880.)

## RECEIPTS.

United States passengers, six months .....	\$231 00	
United States mail .....	532 65	
United States freight .....	1,468 77	
Commercial passengers .....	36,145 19	
Commercial freight .....	71,979 40	
Express .....	2,260 68	
Miscellaneous .....	2,186 74	
Total earnings .....		114,804 43

## EXPENDITURES.

Conducting transportation .....	\$28,166 32	
Motive power .....	25,691 36	
Maintenance of cars .....	3,433 21	
Maintenance of way .....	44,614 51	
General expenses and taxes .....	18,045 31	
Total operating expenses .....		119,950 71
Deficit, seven months .....		5,146 28

\* Including government freight.

*Union Pacific Railway Company (1,815 miles).*

(Five months ending June 30, 1880.)

## RECEIPTS.

United States passengers .....	\$104,158 00	
United States freight.....	174,098 52	
United States mail .....	304,883 61	
		<u>\$583,140 13</u>
Commercial passengers.....	2,475,030 57	
Commercial freight.....	*5,470,835 21	
Express.....	202,122 11	
		<u>8,237,987 89</u>
Miscellaneous .....		154,879 08
		<u>8,976,007 10</u>
Total earnings .....		8,976,007 10
Discount and interest received.....	13,744 06	
Interest on bonds held.....	286,620 01	
Dividends on stocks held .....	68,590 00	
Gains on investments.....	30,666 67	
Miscellaneous, lands, &c.....	711,449 61	
		<u>1,111,070 35</u>
Total income receipts.....		<u>10,087,077 45</u>

## EXPENDITURES.

Conducting transportation.....	\$805,345 85	
Maintenance of way.....	1,440,872 08	
Motive power .....	1,405,598 62	
Maintenance of cars.....	312,692 68	
General expenses and taxes.....	347,990 92	
		<u>\$4,312,500 15</u>
Total operating expenses.....		\$4,312,500 15
Discount and interest .....	50,154 62	
Interest on funded debt .....	1,380,873 75	
Sinking fund requirement (company's) .....	73,700 00	
New construction.....	117,554 86	
New equipment .....	660,401 16	
Dividends .....	1,386,784 50	
Land expenses .....	139,830 26	
		<u>3,809,299 15</u>
Total income expenses.....		<u>8,121,799 30</u>
Total expenditures .....		<u>1,965,278 15</u>
Surplus, five months .....		1,965,278 15

The following statement shows the financial condition of the company on June 30, 1880. It will be seen that there is quite a large surplus to the credit of income account, notwithstanding the fact that the investments of the company are counted at cost.

The statement immediately succeeding shows the condition of the Union Pacific Railroad Company January 31, 1880; that is, prior to consolidation. The consolidation took effect January 26, 1880, but the accounts of earnings, expenses, &c., of the new company were not opened until of date February 1, 1880, for the sake of convenience and simplification of much of the detail in the auditor's and other offices.

\* Including \$526,517.45 "company's freight."

*Union Pacific Railway Company.*  
(At close of five months ending June 30, 1880.)

LIABILITIES.

United States subsidy bonds.....	\$33,539,512 00
Interest on United States bonds.....	25,050,071 34
Other bonded debt.....	82,434,357 62
Interest due and accrued.....	1,163,402 88
Pay rolls and vouchers.....	1,691,486 34
Bills payable.....	2,894,368 60
Accounts payable.....	1,732,600 72
Dividends payable.....	699,640 00
Capital stock.....	50,762,300 00
	<hr/>
	196,967,729 50
Balance, surplus or credit to income account, including land sales, &c.	1,974,739 39
	<hr/>
	201,942,468 89

ASSETS.

Road and equipment.....	\$154,485,642 29
Real estate other than road.....	77,949 60
Fuel, material, &c., on hand.....	1,850,669 82
Cash.....	2,047,329 79
Company's bonds and stocks.....	1,320,685 60
Other bonds and stocks and investments.....	15,338,453 94
Bills receivable.....	78,194 74
Accounts receivable.....	7,121,617 87
Due from the United States.....	5,818,752 21
Interest repaid to the United States.....	6,802,008 31
United States sinking fund.....	538,327 51
Sinking fund with trustees.....	613 12
	<hr/>
	195,480,244 80
Land contracts, land—cash, &c.....	6,462,224 09
	<hr/>
	201,942,468 89

*Union Pacific Railroad Company.*  
(January 31, 1880.)

LIABILITIES.

United States bonds.....	\$27,236,512 00
Interest on United States bonds.....	19,238,182 89
Other bonded debt.....	51,753,000 00
Interest due and accrued.....	129,956 06
Pay-rolls and vouchers.....	166,202 37
Bills payable.....	3,380,741 54
Accounts payable.....	385,075 47
Dividends payable.....	10,879 00
Capital stock.....	36,762,300 00
	<hr/>
	139,062,849 33
Land sales.....	8,786,399 23
Surplus, or credit to income account.....	1,454,876 43
	<hr/>
	149,304,125 04

ASSETS.

Road and equipment.....	\$120,753,718 02
Cash.....	110,015 31
Company's bonds and stocks.....	202,195 53
Other bonds and stocks.....	7,705,490 73
Bills receivable.....	40,000 00
Accounts receivable.....	3,494,522 57
United States transportation withheld.....	9,279,409 06
Operating department.....	1,591,136 94
	<hr/>
	143,176,488 76
Land—cash, and land notes.....	4,193,821 54
Land expenses.....	1,933,814 74
	<hr/>
	149,304,125 04

For the year ending December 31, 1879, and as ascertained in accordance with the act of Congress approved May 7, 1878, the "net earnings" of the Union Pacific Railroad Company were \$6,131,664.48, of which sum \$1,532,916.12—being twenty-five (25) per cent. thereof—is payable to the United States on account of the bond and interest indebtedness.

The following is a detailed statement of the earnings and expenses for the year, which has been verified by examination of the books of the company. The amount claimed for mail service is subject to such correction as may be found necessary upon decision of the Supreme Court yet to be had.

*Statement of Earnings and Expenses of the Union Pacific Railroad Company, 1879.*

(As ascertained in accordance with the act of Congress of May 7, 1878.)

EARNINGS.		
United States: passenger.....	\$150,965 23	
freight .....	401,947 78	
mail .....	596,775 00	
		\$1,149,688 01
Commercial: passenger.....	3,056,944 69	
freight .....	7,424,516 52	
express .....	360,840 90	
		10,842,302 11
Company freight.....	865,949 94	
Car service.....	11,188 13	
Rent of buildings.....	44,624 60	
Miscellaneous .....	314,998 26	
		1,236,760 93
Total earnings .....		<u>13,228,751 05</u>
EXPENSES.		
Conducting transportation .....	1,004,507 89	
Motive power .....	2,004,334 16	
Maintenance of cars.....	447,012 81	
Maintenance of way.....	1,397,696 78	
General expenses.....	595,807 55	
		5,449,359 19
Car service.....	11,167 39	
Interest paid on bonds—first mortgage.....	1,636,530 00	
Premium on gold.....	29 99	
		1,647,727 38
Total expenses under law of May 7, 1878.....		<u>7,097,086 57</u>
Net earnings so ascertained.....		<u>6,131,664 48</u>
Twenty-five per cent of net earnings ascertained.....		1,532,916 12
Deduct United States transportation, as above, 1879.....		<u>1,149,688 01</u>
Remainder—cash or additional payment required under the law.....		383,228 11
The disposal of the amount, \$1,532,916.12, being 25 per cent of the net earnings so found, is considered by this office to be as follows, viz:		
One-half transportation service .....	\$574,844 01	
Cash payment—five per cent of net earnings .....	306,583 22	
For credit on bond and interest account.....	881,427 23	
One-half transportation service .....	574,844 00	
Cash payment, being that portion of the \$850,000 named in section 4 of the act, which is required for the year 1879.....	76,644 89	
Payable into the sinking fund established in the Treasury of the United States.....		<u>651,488 89</u>



This view of the question of disposal coincides with that adopted by the Judiciary Committee of the Senate, when the bill which subsequently became law was reported back—Senate Report No. 111, Forty-fifth Congress, second session, page 5. The “five per cent. of net earnings” are still payable under section 6 of the act of Congress approved July 1, 1862 (12 Statutes, 489), the act of May 7, 1878, merely defining, in section 1, how the net earnings were to be ascertained after June 30, 1878. The company’s officers have taken the view that, as the Supreme Court of the United States decided in the “five per cent.” cases that expenditures for new equipment and new construction were to be considered “operating expenses,” such items of expenditure are deductible from earnings under the definition given in the first section of the sinking-fund law. If the decision of the Supreme Court is to govern, then the item of interest on first-mortgage bonds cannot be deducted as an expense, as now considered according to the plain instructions of the act. Additional new equipment and new construction can in no sense be considered either as “necessary expenses actually paid within the year in operating” the road, or for “keeping the same in a state of repair.” Then again, the items expended for such equipment and construction will probably in no year amount to anything approaching the sum paid as interest on first-mortgage bonds; so that taking the principle laid down in the “five per cent.” decisions in one case and the principles laid down in the act of 1878 in another, the sinking-fund act basis of net earnings is much more favorable to the railroad companies than that of the Supreme Court.

In table No. 11, attached to this report, will be found comparative statements of the earnings and expenses of the company (consolidated), and of the previous companies, covering a period from January 1, 1878, to June 30, 1880.

#### CENTRAL PACIFIC RAILROAD COMPANY.

The Central Pacific Railroad Company was operating on June 30, 1880, 2,487.20 miles of railroad, as against 2,323.61 on June 30, 1879. Of this mileage the company owns 1,204.50, and operates, under lease, 1,282.70. Of the 1,204.50 miles, 860.66 have been subsidized by the United States with bonds, and 1,012.47 with lands.

The report of the railroad engineer in regard to the condition of this property, including a portion of the leased lines, is referred to for details of information and inspection.

During the fiscal year the company has opened the new and shorter route from Sacramento to San Francisco, via Benicia and Port Costa, using a mammoth transfer ferry-steamer to carry trains across the straits of Carquinez.

This route is over roads *not subsidized* by the United States. The eastern overland mail is carried on this route, and the bulk of the overland freight and passenger traffic is done upon it, in preference to the much longer subsidized line. A question suggests itself in this connection, however, as to whether three or four hours quicker transit is more to be considered by the Railway Mail Service than the retention of a larger or smaller proportion of the compensation for carrying the mail. More important even than that is the fact that the use of the new route reduces the amount of through and local business on the subsidized line extending from Sacramento to Niles, via Tracy, on the net earnings of which the government is entitled to twenty-five per cent., under the requirements of the sinking-fund law. And in the same

direction, but of vaster proportions, is the still greater fact that when the junction of this company's leased lines from Goshen, south and east, is effected with those of the Atchison, Topeka and Santa Fé Company, in New Mexico, of every dollar of overland business diverted and done on that route at least fifty cents will be lost from payments on the debt of the Pacific Railroad Companies to the government.

While the property of the Central Pacific Railroad Company as a whole is in good condition and well maintained, there are some things mentioned by the engineer which seem to require notice. A good many small girder bridges have masonry in poor condition, and should be rebuilt. Temporary trestle approaches to bridges in the Sierras should be done away with. The supply of steel rails for renewals on the main line has not kept up with deterioration of the old iron, so that there are a few badly worn places. The engineer considers it important, and with good reason, that switches in the snow galleries and on all that portion of the road, even between Rocklin and Truckee, about 100 miles in length, should be lighted for night trains. It is recommended that the section for girders for small spans should be increased as renewals are made, and that truss bridges as rebuilt should be designed for heavier loads. The floor system for bridges on this road is faulty; ties are too far apart; are liable to be bunched; are short, and generally without guard-rails to prevent a derailed truck from leaving the bridge.

Among the more noteworthy improvements on the subsidized portion of the road may be mentioned the new car-shops and other buildings at Ogden, Utah, and the extensive yard facilities furnished at that point; the spacious and convenient new passenger depot at Sacramento, and also the new freight depot at the same place, and the very extensive renewals of snow-gallery necessitated by the destructive avalanches of last winter.

On the unsubsidized portion of the company's property and railroad, the extensive improvement in progress at Oakland wharf is worthy of notice. A solid and safe embankment, of stone and gravel brought from the Alameda Cañon, beyond Niles, some seventy-five or more feet wide, and over a mile long, increasing in width at the terminal point in the bay to 280 feet, with a length of 1,250 feet—being an area of about eight acres—it will afford the company permanent and probably ample room for the largely increasing business at that point, and result in great economy, as compared with the present piling and wharf arrangements.

Of the road (1,204½ miles), 462 miles had steel track on June 30, 1880.

#### SOUTHERN PACIFIC OPERATED BY CENTRAL PACIFIC.

That portion of the Southern Pacific which is leased and operated by the Central Pacific Railroad Company extends from Huron to the Colorado River opposite Yuma, 550.20 miles, of which 340 miles were steel track on December 31, 1879.

There are nearly three miles of tunnels on this road in the Tehachapi and San Fernando Mountains. The water supply between Walters and the Colorado River is very deficient—water trains having to be run continually more than 100 miles through this desert, much of which is below the ocean level.

The western end of the Southern Pacific of Arizona is also quite deficient in supply of good water, the greater portion of the country through which it runs being probably as desert land as can be found anywhere, which, added to the great heat of summer in that region, makes railroad work costly and difficult.

The system of short vandyke ditches and culverts adopted by the company to protect its track from washouts caused by cloudbursts in the region of country east of Seven Palms, in Southern California, has proved very successful, but no protection has yet been found against the terrible sand storms to which the desert is subject or against the drift of sand which often blockades the track and interferes with railroad operations. Until an eastern connection is made, the main traffic will be, as it has been in the past, that dependent upon supplies of machinery and merchandise for the numerous and thriving mining communities of Southern Arizona. When an eastern connection is effected, no doubt much of the business from and to the east which now passes over the Union, Central, and Southern Pacific Roads will be done by the Atchison, Topeka and Santa Fé, which will have the bulk of the mileage, while the Arizona Road will have but a small portion over its 200 or 250 miles. This being so, the earnings of the leased lines south of Goshen, Cal., as well as those of the main line of the Central and Union Pacific, may be expected, with some reason, to decrease, unless new business, arising from other sources and from the natural development of the country through which they pass, make up the loss. There can be little question as to this result, the distance from Saint Louis to Tucson, via New Mexico, being but 1,676 miles, while by the present roundabout line it is 3,128 miles; and the distance from Chicago to Tucson by the former route will be but 1,882 miles as against 3,218 miles by the present over-land lines.

The receipts and expenditures of the Central Pacific Railroad Company for the year ending June 30, 1880, have been as follows:

RECEIPTS.	
Earnings .....	\$17,802,448 16
Other income .....	929,126 08
Total receipts.....	<u>18,731,574 24</u>
EXPENDITURES.	
Operating expenses and taxes .....	\$8,608,962 92
Rental leased lines .....	3,009,867 63
Interest funded debt paid .....	3,472,740 00
Discount and interest .....	309,085 96
New construction .....	237,399 87
New equipment .....	30,617 92
Other income expenditures .....	1,058,358 12
Total expenditures .....	<u>16,727,032 42</u>
Surplus available for interest due and unpaid, United States sinking-fund act and other requirements, dividends, &c .....	2,004,541 82
Interest on funded debt due and unpaid (estimated).....	\$1,000,000
Requirement for the United States debt (estimated) .....	1,000,000
Dividends paid, three per cent .....	1,628,265
	<u>3,628,265 00</u>
Deficit for the year.....	<u>1,623,723 18</u>

The details are given in the following statements:

*Central Pacific Railroad Company.*

(Year ending June 30, 1880. Miles operated, 2,389.93.)

EARNINGS AND OTHER RECEIPTS.	
Passenger, through, including United States.....	\$1,613,106 80
Passenger, way, including United States.....	3,622,408 82
Freight, through, including United States.....	2,332,655 02
Freight, way, including United States .....	8,568,276 45

Mail, United States .....	\$488,610 32
Express under Wells, Fargo & Co. contract .....	210,540 98
Sleeping-car service .....	179,477 22
Coal transportation .....	268,154 40
Rents .....	64,681 55
Miscellaneous sources .....	454,478 60
Gross earnings .....	17,802,448 16
Profits on investments .....	458,741 61
Land receipts .....	422,664 01
Steamer division .....	47,720 46
Total receipts .....	18,731,574 24

## EXPENDITURES.

Conducting transportation .....	2,102,035 56
Maintenance of way .....	1,995,770 22
Motive power .....	2,320,084 87
Maintenance of cars .....	673,449 82
General expenses and taxes .....	1,517,622 45
Total operating expenses .....	8,608,962 92
Rental leased lines .....	\$3,009,867 63
Discount and interest .....	309,085 96
Interest on first-mortgage bonds .....	\$1,718,280 00
Interest on other debt .....	1,754,460 00
Losses operating river steamers .....	22,511 81
Expenses land department .....	69,533 29
New construction .....	237,399 87
New equipment .....	30,617 92
Land bonds redeemed .....	647,365 05
Surveys .....	14,351 15
Requirements company's sinking funds .....	304,596 82
Dividends, 3 per cent .....	1,628,265 00
Total income expenses .....	\$9,746,334 50
Total expenditures .....	18,355,297 42

The following statement shows the financial condition of the Central Pacific Railroad Company on June 30, 1880:

## LIABILITIES.

United States subsidy bonds .....	\$27,855,680 00
Interest on subsidy bonds .....	20,106,781 81
Other bonded debt .....	56,830,000 00
Interest due and accrued .....	1,484,345 00
Bills payable .....	790,807 19
Accounts payable .....	4,926,200 76
Dividends .....	2,811 00
Capital stock .....	*59,275,500 00
Trustees land-grant mortgage .....	171,272,125 76
	224,164 59
Total .....	171,496,290 35

## ASSETS.

Road and fixtures .....	\$136,558,752 45
Equipment .....	8,045,283 10
Real estate .....	2,560,396 81
Cash .....	1,855,337 31
Material, &c .....	1,932,696 76
Company's bonds and stocks .....	7,259 29
Other bonds and stocks and investments .....	2,326,763 11
Bills receivable .....	1,877,773 56

\*Capital stock issued during the year, \$5,000,000, has increased the balance outstanding from \$54,275,500 to this sum.

Sinking-fund with trustees.....	\$4,187,176 65
Accounts receivable.....	786,795 65
United States transportation account }	
United States sinking-fund account.. }	4,929,239 82
	<hr/>
	165,067,473 51
Balance, deficit.....	6,428,816 84
	<hr/>
	171,496,290 35
	<hr/>

For the year ending December 31, 1879, and as ascertained in accordance with the requirements of the act of Congress approved May 7, 1878, known as the sinking-fund law, the net earnings of the Central Pacific Railroad Company were \$3,598,255.68, of which sum \$899,563.92 (being 25 per cent. thereof) is payable to the United States on account of the bond and interest and sinking-fund accounts. The following is a detailed statement of the earnings and expenses for the year named, which have been verified by examination of the books of the company in San Francisco and New York. The company having operated many miles of unsubsidized road—some of it owned and some leased—and on which no separate accounts for certain expenditures had been or could be kept without great difficulty, a *pro rata* on various bases has been adopted for their distribution; otherwise, the amounts are actual.

*Statement of earnings and expenses of the Central Pacific Railroad Company, 1879.*

[Ascertained in accordance with the act of Congress of May 7, 1878.]

Earnings.	Through.	Local.	Leased lines.	Total.
Subsidized line proportion: 90.06538 per cent. of through; 66.1692 per cent. of local.....	\$4,417,561 87	\$5,640,770 48	.....	\$10,058,332 35
Unsubsidized line proportion: 9.93462 per cent. of through; 33.8308 per cent. of local.....	487,277 12	2,883,997 00	.....	3,371,274 18
Amount found by auditor of company on a <i>pro rata</i> of mileage.....			\$3,237,875 33	.....
Add 15 per cent. leased lines being en- titled to for business.....			485,081 30	3,723,556 63
Totals .....	4,904,838 99	8,524,767 51	3,723,556 63	\$17,153,163 16
Average miles operated during the year .....	804.75	1300.604	1018.226	2318.92
Average miles of subsidized road operated during year.....	805.86	860.66	.....	860.66
Percentage-subsidized road to whole..	90.06538	66.1692	.....	37.114.68
Percentage of gross earnings after Stockton and Copperopolis (\$101,- 553.92) deducted .....	28.7646	49.9340	21.2414	100

EXPENSES.

Items and amounts as hereafter distributed:

Operating ledger accounts.....	\$10,207,862 89
General ledger accounts:	
General expenses .....	394,752 79
Legal expenses .....	190,136 38
Engineering.....	20,846 02
Taxes .....	312,609 22
Interest on first-mortgage bonds.....	1,671,540 00
Total .....	<hr/> 12,797,787 30 <hr/>



*Distribution of expenses (\$12,797,787.30).***Deductions:**

"General expenses"—items questioned, or not located on subsidized property .....	\$226,337 38
"Legal expenses"—items questioned, or not located on subsidized property .....	38,156 03
"Engineering"—items questioned, or not located on subsidized property .....	310 00
"Taxes," lands .....	32,544 39

**Located:**

Stockton and Copperopolis, leased and unsubsidized .....	56,417 63
Rentals of leased lines, subsidized .....	\$43,629 05
Rentals of leased lines, other .....	2,646,694 10
	<hr/>
	2,690,323 15
Snow service, subsidized line .....	49,049 82
Snow-sheds, subsidized line .....	19,710 82
Track repairs, subsidized line .....	821,084 25
Track repairs, unsubsidized line .....	719,710 03
	<hr/>
	1,540,794 28
Bridges and buildings, unsubsidized line .....	88,949 88
Bridges and buildings, subsidized line .....	145,136 60
	<hr/>
	234,086 48
Taxes, subsidized line .....	192,672 22
Taxes, unsubsidized line .....	83,142 18
	<hr/>
	275,814 40
Interest on first-mortgage bonds, subsidized line .....	1,671,540 00

**Not located (distributed on proportion of gross earnings, see statement, ante):**

Through, \$1,715,147.64 (28.7646 per cent.); local, \$2,980,993.69 (49.9940 per cent.); leased lines, \$1,266,561.59 (21.2414 per cent.) .....	5,962,702 92
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<b>Total</b> .....	<b>12,797,787 30</b>
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**On mileage basis:****Subdistribution of "not located," as above:**

Subsidized: Through, \$1,544,754.24 (90.06538 per cent.); local, \$1,972,499.67 (66.1692 per cent.); total .....	3,517,253 91
Unsubsidized: Through, \$170,393.40 (9.93462 per cent.); local, \$1,008,494.02 (33.8308 per cent.); total .....	1,178,887 42
Leased .....	1,266,561 59

<b>Expenses not located, total</b> .....	<b>5,962,702 92</b>
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*Statement showing "net earnings" of subsidized railroad from data adduced.***EARNINGS.**

Through .....	\$4,417,561 87
Local .....	5,640,770 48
	<hr/>
<b>Total</b> .....	<b>\$10,058,332 35</b>

**EXPENSES.****Located:**

Rental of 5 miles of Union Pacific .....	\$43,629 05
Snow service .....	49,049 82
Snow-sheds .....	19,710 82
Track repairs .....	821,084 25
Repairs, bridges and buildings .....	145,136 60
Taxes .....	192,672 22
Interest on first-mortgage bonds .....	1,671,540 00

**Not located:**

As per "subdistribution," see previous statement .....	3,517,253 91
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<b>Total</b> .....	<b>6,460,076 67</b>
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<b>Net earnings, "act of May 7, 1878"</b> .....	<b>3,598,255 68</b>
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"Twenty-five per cent. of net earnings" .....	\$899,563 92
Less; mail service, as per company's books .....	\$417,347 23
Other service, as per company's books .....	253,140 37
Total service.....	670,487 60
Difference, being amount payable in money .....	229,076 32

The disposal of the amount of the "twenty-five per cent. of net earnings," \$899,563.92, is as follows :

One-half transportation service on subsidized line .....	\$226,378 36
Five per cent. of net earnings.....	179,912 78
Total for credit of bond and interest account .....	406,291 14
One-half transportation service on subsidized lines.....	226,378 36
Additional payment required to make the whole of these items amount to "25 per cent. of net earnings" .....	266,894 42
Total for sinking fund account.....	493,272 78

During the year the company rendered service to the government on unsubsidized roads to the amount of \$217,730.88, which, deducted from the amount of the two items "five per cent.," \$179,912.78, and "additional payment required," &c., \$266,894.42, which is \$446,807.20, leaves \$229,076.32 payable by the company in money. This amount has been deposited in the Treasury, \$100,000 on August 23, and \$129,076.32 later on, the payment being made by the company under protest, and reserving all the rights of the company, either in law or in equity. In the letters to this office from the Vice-president of the company, giving notice of the payments, the unprofitable nature of the investments for the sinking fund, and the slow process of settling the accounts for transportation, and passing the amounts found due therefor to the credit of the company, are forcibly and with good reason called in question. The remedy is simple, but it lies with the law-making power. On June 30 and October 31, 1880, the market price of the various securities referred to was as follows :

Character of bond.	June 30, 1880.	October 31, 1880.
United States funded loan of 1881, 5 per cent., registered.....	103½	102
United States funded loan of 1907, 4 per cent., registered.....	108½	109½
United States currency sixes (average maturity), 1897, 6 per cent., registered .....	123	126
Union Pacific first mortgage, 6 per cent.....	115½	114
Central Pacific first mortgage, 6 per cent .....	114½	113

Although the currency sixes were quoted as above stated, yet, between those dates, when the investment was made by the Secretary of the Treasury, it is presumed that none could be obtained lower than the price paid, namely, 129½, and if this be so, any future investment in them will cost still more, say 135 or 140, as the whim or option of holders may choose to demand.

While the lands granted to this company are not as valuable as is generally supposed, large quantities being of a character utterly useless for either agricultural or grazing purposes, some 750,000 acres have sold at an average price of, say, \$6 per acre, but these are perhaps the very best lands in the entire grant. The number of acres remaining unsold is nearly 11,000,000, worth at a fair estimate not over \$1.25 per acre as an average, millions of acres having no value whatever. Table

No. 10 gives detailed information in regard to the land-grants of this company.

Table No. 11 gives comparative statements of the earnings and expenses of the railroad operated by this company for various periods as therein designated.

#### CENTRAL BRANCH UNION PACIFIC RAILROAD COMPANY.

Since my last annual report, important changes have occurred in the ownership and management of this property. Some time in December, 1879, a controlling interest in this road was purchased by the owners of the Kansas Pacific, in order to avoid the complications and waste of capital likely to result from the building of parallel lines in Central Kansas and westward, where the branch lines and extensions of both companies were being pushed. Since the consolidation of the Union and Kansas Pacific Companies, the interest in this property is owned by the Union Pacific Railway Company, the president of which company is also president of the Central Branch.

The road and the leased lines controlled by it (363.34 miles on June 30, 1880) are operated by the Missouri Pacific Railway Company, with whose road it connects at Atchison.

The subsidized property was inspected in September, 1880, and the report of the engineer gives details of condition. Generally the road, track, and buildings have been kept up and improved, while large additions have been made to the equipment.

The business of the road for the past year has largely increased over that of previous years, and if crops are good during the coming year, still better results may be expected. The country through which the road runs is filling up with an intelligent farming population, so that its future prosperity is placed beyond question.

The tables attached to this report furnish information in detail in regard to lands, comparative earnings, and other matters.

The receipts and expenditures of this road for the year ending June 30, 1880, have been as follows:

*Central Branch Union Pacific Railroad Company, for the year ending June 30, 1880 (miles operated, 300).*

#### RECEIPTS.

Commercial passenger.....	\$208,866 26	
Commercial freight.....	754,757 75	
United States mail.....	16,567 01	
Express.....	9,330 00	
	<hr/>	\$989,521 02
Miscellaneous.....		28,363 37
		<hr/>
Total earnings.....		1,017,884 39
Land receipts (6 months, 1880).....		102,530 70
		<hr/>
Total receipts.....		<u>1,120,415 09</u>

#### EXPENDITURES.

Conducting transportation.....	\$148,305 52	
Maintenance of way.....	347,919 57	
Motive power.....	156,510 08	
Maintenance of cars.....	35,572 01	
General expenses, including taxes.....	56,076 44	
	<hr/>	
Total operating expenses.....		\$744,384 22

## INCOME EXPENSES.

Rental leased roads.....	\$196,924 15
Interest, first-mortgage bonds.....	96,000 00
Interest on other funded debt.....	22,050 00
New construction and equipment .....	189,703 64
Expenses land department.....	10,193 75
Total income expenses.....	<u>\$514,871 54</u>
Total expenditures.....	<u>1,259,255 76</u>
Deficit.....	<u><u>138,840 67</u></u>

The liabilities and assets of the company, so far as can be ascertained, are as follows:

*Central Branch Union Pacific Railroad Company, June 30, 1880.*

## LIABILITIES.

United States subsidy bonds.....	\$1,600,000 00
Interest on United States bonds.....	1,261,808 26
Other bonded debt.....	2,225,218 14
Interest on bonded debt.....	5,221 87
Pay-rolls and vouchers.....	5,911 36
Bills payable for equipment .... \$139,871.95 }	
Bills payable for land department. 104,570.19 }	244,442 14
Accounts payable.....	313,365 59
Capital stock .....	1,000,000 00
	<u>6,655,967 36</u>

## ASSETS.

Road and fixtures.....	\$3,962,974 75
Cash.....	11,587 50
Company's bonds and stocks.....	15,400 00
Other bonds and stocks and investments.....	120,245 89
Bills receivable (land contracts) .....	430,978 47
Accounts receivable.....	42,281 97
Due from United States.....	18,573 65
Interest repaid to United States.....	54,548 60
	<u>4,656,500 83</u>
Deficit, or debit to income.....	<u>1,999,376 53</u>
	<u><u>6,655,967 36</u></u>

## THE SIOUX CITY AND PACIFIC RAILROAD COMPANY.

This company owns 107.42 miles of railroad, and operated under lease the branch lines extending from Fremont, Nebr., westward, known as the Fremont, Elkhorn and Missouri Valley Railroad and Extensions, 109.99 miles, on June 30, 1880.

The inspection of this property was made in August, 1880, but did not include the road west of California Junction.

With all the difficulties connected with the operation of this railroad, the precarious crossing of the Missouri River, at Blair, and the refusal of the Union Pacific to give equal facilities and rates for business, great improvement, both in the property itself and in the business, is noted.

In addition to keeping the property in ordinarily good repair, the company has expended large sums in rebuilding bridges, all of which are now in first-class order.

The earnings on the subsidized portion of this road for the current year, 1880, are much larger than ever before, as will be seen by reference to Table No. 11.

The receipts and expenditures of the company for the year ending June 30, 1880, from business on lines owned and leased, have been as follows:

*Sioux City and Pacific Railroad Company for year ending June 30, 1880. (Miles operated, 217.41.)*

## RECEIPTS.

United States passenger .....	\$4,277 30	
United States freight.....	2,076 71	
United States mail .....	15,458 81	
		\$21,812 82
Commercial passenger .....	125,915 87	
Commercial freight.....	390,437 03	
Express.....	4,581 31	
		520,934 21
Miscellaneous .....		6,901 01
Total earnings .....		549,648 01
Interest (on investments).....	279 61	
Gains on investments.....	3,714 67	
Receipts on account of business furnished other lines from leased lines of company .....	14,772 61	
Receipts land department .....	181 05	
		18,947 94
Income receipts .....		18,947 94
Total receipts.....		568,595 98

## EXPENDITURES.

Conducting transportation.....	71,834 87	
Maintenance of way.....	127,876 89	
Motive power .....	87,084 13	
Maintenance of cars.....	18,749 81	
General expenses and taxes .....	40,377 33	
Maintenance of ferry.....	46,361 53	
		392,284 56
Total operating expenses .....		392,284 56
Rental of leased lines.....	28,947 47	
Discount and interest.....	439 90	
Interest on bonds .....	97,680 00	
Dividends .....	11,830 00	
Expenses of land department .....	25	
		138,897 62
Total income expenses .....		138,897 62
Total expenditures .....		531,182 18
Surplus .....		37,413 80

The financial condition of the company on June 30, 1880, was as follows:

## LIABILITIES.

United States subsidy bonds.....	\$1,628,320 00	
Interest on United States bonds.....	1,171,199 89	
First-mortgage bonds .....	\$1,628,000 00	
Interest on bonds.....	51,165 00	
Pay-rolls and vouchers .....	74,140 22	
Bills payable.....	19,130 00	
Accounts payable .....	\$53,673 99	
Company's accounts, traffic.....	101,470 06	
Company's accounts, leases .....	30,177 78	
		185,321 83
Capital stock.....		2,068,400 00
		6,825,676 94

## ASSETS.

Road and fixtures .....	\$5,355,551 23
Fuel, material, &c .....	51,012 64
Cash .....	44,638 52
Company's bonds .....	5,000 00
Miscellaneous investments .....	14,130 00
Accounts receivable .....	\$57,645 62
Accounts—traffic .....	96,457 40
	<hr/>
	154,103 02
Due from the United States .....	120,021 98
	<hr/>
	5,744,456 84
Deficit or debit to income .....	1,081,220 10
	<hr/>
	6,825,676 94
	<hr/>

## THE DEFICITS OF THE PACIFIC RAILROAD COMPANIES.

From the statements given, showing the financial condition of the subsidized companies, it appears that the following deficits in "income or profit and loss accounts," existed on June 30, 1880:

Central Pacific .....	\$6,428,816 84
Central Branch Union Pacific .....	1,999,376 53
Sioux City and Pacific .....	1,081,220 10

From the statement given of the Union Pacific Railway Company there was *no deficit*, but a surplus on June 30, 1880, amounting to \$1,974,739.39; so that the company, at that time, was virtually in condition to pay its entire debt to the Government as well as an additional four per cent. dividend on its capital stock.

It will be noticed that these statements of the "liabilities" of the companies contain an item "Interest on United States bonds," as well as the principal of the "United States subsidy bonds." This item of interest, stated as a "liability", is not due until the maturity of the bonds—ranging from 1895 to 1899, and the surplus and deficits named are based upon the statement of this interest as owing by the companies; the amounts for each company to June 30, 1880, are as follows:

Union Pacific .....	\$25,050,071 34
Central Pacific .....	20,106,781 81
Central Branch Union Pacific .....	1,261,808 26
Sioux City and Pacific .....	1,171,199 89
	<hr/>
Total .....	47,589,861 30

In addition to this large amount of interest already paid by the United States, less the amount retained and applied to its repayment, the government will pay, and the several companies are responsible for, the annual interest for the remaining term of the loan, say seventeen years, at \$3,877,410.72 per year, amounting to nearly \$66,000,000.

## THE NEW OVERLAND ROUTE VIA NEW MEXICO AND ITS PROBABLE EFFECT.

The Atchison, Topeka and Santa Fé Railroad Company advertise the opening of this new overland route to the Pacific as likely to occur on or about January 1, 1881.

The Rio Mimbres has been reached by the Southern Pacific graders and the road will soon be open for operation to that point—1,198 miles from San Francisco. The Atchison, Topeka and Santa Fé track has been laid to a point 125 miles south of Albuquerque on the Rio Grande. The gap on November 1, 1880, is probably not more than 100 miles, which will be laid by the two companies and brought into operation by the time advertised. The opening of this new route is pregnant with important questions, all of which cannot now be discussed.

If distance, cost of operation, and profits controlled rates in the strife for business, the old route would have nothing to fear from such legitimate competition.

The distances by the old and new routes are about as follows:

Termini.	Old route.	New route.	Advantage of old over new route.
	Miles.	Miles.	Miles.
Chicago to San Francisco.....	2,409	2,841	432
Saint Louis to San Francisco.....	2,329	2,635	306
Kansas City to San Francisco.....	2,118	2,352	234

Distance in these cases necessarily adds to cost and reduces profits, but aside from that, the operating expenses of the main line of the old route are much lower in proportion to earnings, and probably lower in actual cost per passenger and per ton per mile, than they can ever be on the line from Pueblo to Goshen—nearly 1,500 miles of country, with little local business, and a scarcity of both water and fuel—true, without obstruction from snow, but often obstructed in other ways.

The following tables show the volume, amount, and course of the “through” business of the Union and Central Pacific Railroads for eight years, from 1872 to 1879, inclusive:

Through business of the Union Pacific Railroad.

Calendar years.	Through passengers.			Through freight.			Total earnings.
	Number carried.	Number carried one mile.	Earnings.	Number of tons carried.	Number of tons carried one mile.	Earnings.	
1872.....	59,636	61,548,352	\$2,572,721 11	80,803	83,693,025	\$1,941,678 17	\$4,514,399 28
1873.....	75,960	77,178,471	3,134,445 92	94,001	97,291,347	2,208,513 57	5,342,959 49
1874.....	78,379	80,887,128	3,284,017 39	135,121	139,850,277	2,111,739 18	5,395,756 57
1875.....	103,362	106,609,584	3,310,970 81	157,511	163,023,723	2,842,914 95	6,153,885 76
1876.....	99,422	102,655,041	3,539,224 40	171,586	177,591,469	2,948,018 38	6,487,242 78
1877.....	79,323	82,911,198	2,631,819 19	150,441	155,706,035	2,536,416 55	5,162,235 74
1878.....	66,472	69,123,946	2,229,333 59	160,728	166,353,538	2,724,664 42	4,953,998 01
1879.....	64,440	66,695,400	2,109,325 38	180,215	186,522,525	2,621,872 56	4,731,197 94
Eight years.....	626,994	647,669,120	22,811,857 79	1,130,466	1,170,032,539	19,929,817 78	\$42,741,675 57
Average yearly.	78,378	80,958,640	2,851,482 22	141,308	146,254,067	2,491,227 22	5,342,709 45



*Through business of the Central Pacific Railroad.*

Calendar years.	Through passengers.			Through freight.			Total earnings.
	Number carried.	Number carried one mile.	Earnings.	Number of tons carried.	Number of tons carried one mile.	Earnings.	
1872 .....	55,685	49,279,855	\$1,775,656 16	98,656	85,601,483	\$2,228,591 50	\$4,004,247 66
1873 .....	67,586	59,678,438	2,182,474 61	110,188	95,660,334	2,472,898 71	4,655,373 32
1874 .....	80,291	70,896,953	2,387,986 53	152,443	132,415,564	2,435,710 91	4,823,697 44
1875 .....	105,341	93,016,103	2,911,957 43	173,794	153,460,102	3,158,805 96	6,070,763 39
1876 .....	98,420	88,004,860	2,761,719 06	188,774	166,687,442	3,423,872 04	6,185,591 10
1877 .....	78,682	68,876,206	2,185,169 44	173,239	152,970,037	3,113,935 55	5,299,104 99
1878 .....	63,494	56,065,202	1,778,667 09	180,071	159,002,693	3,181,631 65	4,960,298 74
1879 .....	62,056	54,795,448	1,750,281 10	219,684	193,980,972	2,659,879 37	4,410,160 47
Eight years.....	611,555	540,113,065	17,733,911 42	1,296,849	1,139,778,627	22,675,325 69	40,409,237 11
Average yearly.	76,444	67,514,138	2,216,738 92	162,006	142,472,328	2,834,415 71	5,051,154 63

From these statements it is seen that the average annual amount of earnings from "through" business over the two roads has been \$10,393,864.08. In this lies the most important question for the government to consider at the present time. Under the sinking-fund law, twenty-five per cent., of probably \$6,000,000, of this business is required to be paid into the Treasury by the companies, equal, say, to \$1,500,000 per annum. Should one-half only of this business be diverted to the new route, it would so reduce the net earnings of both companies, more especially those of the Central Pacific subsidized line, which has not a very large local business, that the government share would be reduced more than the one-half of the \$1,500,000 referred to. The matter is one of such importance as to demand the most careful consideration on the part of the government, as bound up in it is the question of security and ultimate payment, or *the loss of the entire debt* of these companies, which at maturity will probably amount to more than one hundred million dollars (\$100,000,000), even after all the compensation for transportation service has been applied thereon.

Another important question which has been suggested by the opening of the new route is that of the consolidation of the Central and Union Pacific systems of railroad, including the Southern Pacific. Without entering into any detailed discussion of this question of consolidation, it may be stated that the charter act authorizes such a consolidation to be made, if the companies themselves choose to do so; that the consolidation would seem to be much more necessary for the conservation of the property, and securing the government debt, of the Central Pacific subsidized line, than it does for that of the Union Pacific; and that its general effect upon both transcontinental and local business would be in the direction of lower rates, by reason of reduced expenses. Yet, should the consolidation take place, there would still remain the question of diversion of business to the new route, and its effect upon the interest of the government—as the consolidated company might divert business from the subsidized line just as much as though no consolidation was entered into—as a subject for the law-making power to deal with.

**RAILROAD CORPORATIONS CHARTERED BY THE UNITED STATES TO WHICH NO BONDS, BUT LANDS ONLY, HAVE BEEN GRANTED.**

These companies, the Texas and Pacific, the Northern Pacific, and the Atlantic and Pacific, are all of them now vigorously pushing on the construction of their lines. Only one of the properties has been examined during the year—the Northern Pacific—which company has continued to make full and free reports of all their operations and affairs to this office. The Texas and Pacific rendered its annual report, as called for by the provisions of its charter, on November 5, 1880, more than four months after the time prescribed by law. The Atlantic and Pacific Company has not rendered any reports to this office, but its successor in Missouri, the Saint Louis and San Francisco Railway Company, has rendered partial reports.

**THE TEXAS AND PACIFIC RAILWAY COMPANY.**

This company has a grant of land from the United States in the Territories of New Mexico and Arizona and in the State of California; but, not having constructed any railroad therein, no lands have been earned or acquired. No patents for lands have been issued to this company.

Section 13 of the act of Congress approved March 3, 1871 (16 Statutes at Large, 577), requires the president of the company to make an annual report by the first day of July, under oath, exhibiting the financial situation of the company, the amount of money received and expended, and the number of miles of road constructed each year; the names and residences of the stockholders, directors, and officers of the company, the amount of stock subscribed and actually paid in, a description of the lines of road surveyed and fixed upon for construction, the amount received from passengers and for freight, a statement of the expenses of said road and its fixtures, and a true statement of the indebtedness of said company, and the various kinds thereof.

In accordance with these requirements, the president of the company has made the following report for the year ending June 30, 1880 (the reports for 1878 and 1879 being given in Appendix V of this report):

**Miles of road in operation :**

Shreveport Division, from Shreveport to Marshall .....	39.96
Southern Division, from Marshall to Fort Worth .....	179.93
Jefferson Division, from Marshall to Texarkana Junction .....	69.05
Trans-Continental Division, from Texarkana, via Texarkana Junction, to Sherman .....	155.12
Rio Grande Division, from Fort Worth westwardly .....	40.00

**Total miles in operation .....** 483.86

**The company has under contract about 575 miles of road, as follows :**

	<b>Miles.</b>
From point reached on Rio Grande Division to El Paso .....	520
From Sherman via Whitesboro' to Denton .....	55
<b>Total .....</b>	<b>575</b>

All of the 483.86 miles of road in operation, with the exception of 19 miles within the State of Louisiana and 40 miles recently turned over by contractors, has been inspected by commissioners appointed by the government and duly accepted by the President of the United States.

There is filed with this report a copy of the ninth annual report of the board of directors of the Texas and Pacific Railway Company to the stockholders, covering in detail the operations of the company for its fiscal year ending May 31, 1880.

*Receipts from all sources and how applied for the year ending June 30, 1880.*

On hand June 30, 1879, balance from last annual report ..... \$203,900 68

By receipts from—

Passengers .....	\$466,736 78	
Freight .....	2,975,993 44	
Express .....	22,456 45	
Mail .....	41,622 36	
Telegraph .....	11,090 24	
Miscellaneous .....	5,367 50	
		<hr/> \$2,623,266 77

To payments for—

Conducting transportation .....	422,381 80	
Motive power .....	316,348 81	
Maintenance of cars .....	104,700 46	
Maintenance of way .....	487,917 06	
General expense .....	211,551 31	
		<hr/> 1,542,899 44

By net earnings from operating road ..... 1,080,367 33

By receipts from other sources:

From Texas land sales .....	\$144,330 28	
Less income bonds and scrip received in payment for lands sold .....	140,167 88	
		<hr/> \$4,162 40
From town-lot sales .....	2,761 14	
From interest on securities .....	26,843 76	
From construction bonds .....	993,000 00	
From capital stock .....	751,000 00	
From adjustment of accounts (!) .....	542,283 09	
From sundry securities .....	65,985 00	
		<hr/> 2,386,035 39

Total ..... 3,670,363 40

Against which there is charged—

For interest on bonds .....	\$662,520 00	
For construction and equipment .....	1,498,604 35	
For sinking fund, first mortgage bonds .....	71,040 00	
For land department .....	29,668 06	
For property account .....	200,830 00	
For reduction of liabilities .....	890,724 02	
For sundry accounts .....	22,159 48	
		<hr/> 3,375,545 91

Balance on hand June 30, 1880:

Cash .....	\$56,908 65	
Material .....	166,925 42	
Due from agents .....	70,983 42	
		<hr/> 294,817 49
		<hr/> 3,670,363 40

FINANCIAL CONDITION OF THE TEXAS AND PACIFIC RAILWAY COMPANY,  
JUNE 30, 1880.

Capital stock authorized .....	\$50,000,000 00
Capital stock issued .....	8,653,500 00
Capital stock full paid .....	8,653,500 00

## LIABILITIES

First mortgage 6 per cent. gold construction bonds, Eastern Division, \$8,000 per mile, payable March 1, 1905 .....	\$3,481,000 00
Consolidated mortgage 6 per cent. gold construction bonds, Eastern Division, \$17,000 per mile, payable June 1, 1905 .....	7,619,000 00
Income and land grant 7 per cent. currency bonds, limited to an issue of \$8,908,000, dated ———, payable June 1, 1905 .....	8,276,000 00
First mortgage construction 6 per cent. gold bonds, Rio Grande Division, \$25,000 per mile, payable ——— .....	751,000 00
Land grant bonds, old issue .....	138,000 00
Coupons old land grant bonds .....	42,665 00
Fractional bond scrip, convertible into bonds on presentation .....	38,824 10
Land department fractional scrip .....	928 58
Interest scrip .....	1,960 00
Unpaid coupons, first and consolidated mortgage bonds .....	3,570 00
Bills payable .....	50,000 00
School fund loan State of Texas .....	181,677 64
Sinking fund first mortgage bonds, payable October 1, 1880 .....	69,620 00
Current balances .....	• 166,943 79
<b>Total liabilities payable in cash .....</b>	<b>20,821,189 11</b>
<b>Scrip issued for interest on income and land grant bonds, and redeemable only in capital stock or lands .....</b>	<b>2,119,150 00</b>

## ASSETS.

Property account .....	406,908 50
Bills and accounts receivable .....	88,219 34
Cash in treasury .....	56,908 65
Material on hand .....	166,925 42
Land department .....	113,563 74
<b>Total .....</b>	<b>832,605 65</b>

Add 484 miles of constructed and equipped road and telegraph line, the value of which does not fully appear on our books because of unadjusted balances, but the construction accounts show an expenditure of \$28,925,840.90. Also, 4,755,862 acres of land in Texas and about 4,000 acres in California, a portion only of which has been valued.

The president of the company also reports equipment on hand as 54 locomotives and 1,000 cars; he also gives the names and residences of the stockholders, officers, and directors of the company.

## THE NORTHERN PACIFIC RAILROAD COMPANY.

The entire property of this company has been inspected by the engineer of this office during the year, who gives a very full report, covering the lands as well as the railroad and appurtenances.

On June 30, 1880, the company was operating 781 miles of railroad, but had about 100 miles of additional road ready for acceptance by the President of the United States.

On the Eastern Division the company has constructed 175 miles of railroad during the calendar year and nearly 125 miles on the Pend d'Oreille Division, and has probably 200 miles more under contract.

The President accepted 100 miles of the road west of Bismarck, or rather west of the Missouri River at that point, on August 16, 1880, and commissioners have been appointed to examine and report on a section of 50 miles farther west on the same line. The report of the commissioners who examined the 100 miles which have been accepted speaks favorably of the character of the road and of the country through which it passes. Some bridges, which are considered not quite up to the factor

of safety in the best practice, will be strengthened when renewal is required. The track has been laid with American iron, made from American ore, in conformity with law.

The railroad of the company has been divided as follows for operation and other purposes :

	Miles.
Wisconsin Division (projected) from Thomson east to Montreal River.....	120
Minnesota Division (in operation) Duluth to Fargo.....	254
Saint Paul Division (in operation) Saint Paul to Brainerd.....	136
Dakota Division (in operation) Fargo to Bismarck.....	194
Missouri Division (constructed and partially operated) Bismarck to Green River..	104
Missouri Division (under construction) Green River to Glendive Creek.....	113
Yellowstone Division (partially located) Glendive Creek to Shield's River.....	340
Rocky Mountain Division (not finally located) Shield's River to Deer Lodge City..	200
Clark's Fork Division (not finally located) Deer Lodge to Lake Pend d'Oreille..	280
Pend d'Oreille Division (under construction) Lake Pend d'Oreille to Ainsworth..	209
Columbia River Division (constructed) Ainsworth to Wallula.....	12
Columbia River Division (not located) Ainsworth to Kalama.....	250
Cascade Mountain Division (not finally located) Ainsworth to Wilkeson .....	240
Cascade Mountain Division (in operation) Wilkeson to Tacoma .....	31
Pacific Division (in operation) Tacoma to Kalama .....	105
Casselton Branch (in operation) Casselton to Elm River.....	31
Total miles constructed and projected.....	2,619

Of this grand total finished and projected, the following table gives a better idea of the progress which has been made :

	Miles.
In operation .....	855
Constructed and ready for operation .....	87
Under construction.....	247
Partially located.....	340
Not finally located .....	720
Not located .....	250
Projected .....	120
Total .....	2,619

Of the road in operation in Minnesota and Dakota—450 miles—from Duluth to Bismarck the grades are light, and much the larger portion tangent, without tunnels, heavy fills or deep cuts, the country being comparatively level. Steel rails have been used to replace iron on that portion of the road where the traffic is heaviest, west of Brainerd and between Brainerd and Saint Paul. The main shops of the company are at Brainerd, where the company has also a substantial and well-arranged building for officers and a fine hotel. With the increase of business and rolling stock the shops at Brainerd must be enlarged, as they are even now quite too small. Brainerd is probably as good a point on the road as can be selected for the purpose, as it must soon become a great lumber market, has the Mississippi River for water supply and drainage, and is well located.

The equipment of the Eastern Division was found in excellent condition, passenger cars supplied with Miller platforms and Westinghouse automatic brakes.

Within a reasonable time and as the requirements or traffic demand, the company proposes to build an iron bridge over the Missouri River at Bismarck, which will be 1,400 feet long, and to cost not over \$1,000,000.

The company is building in Saint Paul a first-class structure to be used as general operating offices, and is providing terminal facilities, and buildings necessary for the large freight business which, during the winter season and the suspension of lake navigation, must have its outlet some other way.



The lands of the company in Minnesota and Dakota east of the Missouri River are purchasable with preferred stock at par; lands between the Missouri and Yellowstone are purchasable with bonds issued on the Missouri Division, or for \$2.60 cash per acre by actual settlers—and so also with the land of the Pend d'Oreille Division in Washington Territory.

As shown by Table No. 10, the estimated grant of public lands to the company is 42,000,000 acres. Of this quantity but 746,509 acres have as yet been patented to the company, although some 2,593,983 acres have been sold to June 30, 1880, the sales for the fiscal year amounting to 304,276 acres at an average price of \$2.67 per acre, realizing \$812,521 and averaging for all sales to date \$3.50 per acre, which gives the large sum of \$9,089,454 already realized from the land-grant.

The company has remaining 39,406,000 acres of land, which, at \$2.50 per acre, will realize the sum of \$97,515,000.

So far as seen the lands granted to this company are worth much above the average of those granted to the other Pacific railroad companies. In Minnesota, in Washington Territory, and in Montana, the timber lands embraced in the grant will be undoubtedly of great value when the railroad is built—without the road their value is more nominal than real; and the same may be said of their coal lands in Dakota and Washington Territories. From Fargo, on the Red River of the North, to the Little Missouri, a distance of 350 miles, all in the Territory of Dakota, lie some 9,000,000 acres of the company's lands, all of which is probably as good an average quality of wheat land as can be found anywhere. From Ainsworth to Spokane Falls, in Washington Territory, some 125 miles, probably two-thirds of the land is equally good wheat land with that found in Dakota, being much the same as that in the vicinity of Walla-Walla, now celebrated for the excellence of both the quantity and quality of its crops. Mr. Nichols' remarks on the character of the company's land are interesting and instructive.

The receipts and expenditures of the company for the fiscal year have been as follows:

*Northern Pacific Railroad Company, 781 miles operated.*

(Year ending June 30, 1880.)

RECEIPTS.	
Commercial passenger.....	\$524,184 55
Commercial freight.....	1,568,613 39
United States mail.....	41,328 91
Express.....	40,303 85
Miscellaneous.....	4,625 66
	<hr/>
Gross earnings Pacific Division (six months).....	\$2,179,056 36
	51,521 01
	<hr/>
Total earnings.....	2,230,577 37
Profits on stocks held.....	19,721 00
Dividends on stocks held.....	5,010 00
Sales of bonds.....	1,421,331 13
Sales of bond certificates, Missouri Division.....	1,803,959 51
Sales of bond certificates, Pend d'Oreille Division.....	730,911 17
Interest and exchange.....	737 77
Receipts from land:	
Preferred stock.....	278,386 89
Bond certificates.....	3,940 00
Cash.....	141,749 65
	<hr/>
Income receipts.....	4,408,747 12
	<hr/>
Total receipts from all sources.....	6,639,324 49
	<hr/> <hr/>



EXPENDITURES.

Conducting transportation.....	\$304,639 55	
Maintenance of way.....	459,818 54	
Motive power.....	333,991 84	
Maintenance of cars.....	78,628 45	
General expenses and taxes.....	210,098 53	
		\$1,387,776 91
Expenses Pacific Division (six months).....		21,377 84
		<hr/>
Total operating expenses.....		1,409,154 75
Income expenditures:		
Interest on first-mortgage bonds.....	147,478 05	
Interest on other debt.....	12,795 98	
New construction.....	3,201,470 13	
New equipment.....	212,032 72	
Improvements and betterments.....	157,525 44	
Expenses of land department.....	75,180 67	
Rentals of leased lines.....	197,163 91	
		<hr/>
Total income expenses.....		4,003,648 90
		<hr/>
Total expenditures.....		5,412,803 65
		<hr/>
Surplus receipts over expenditures.....		1,226,520 84

The earnings and operating expenses for the fiscal year were as follows, details being given in Table No. 11:

Earnings, 721 miles operated.....	\$2,230,577 37
Operating expenses and taxes.....	1,409,154 75
	<hr/>
Net earnings.....	821,422 62

For the eight months ending August 31, 1879 and 1880, as shown in detail in Table No. 11, the earnings and expenses have been as follows:

	Eight months, 1880.	Eight months, 1879.
Earnings.....	\$1,399,398 99	\$1,113,102 73
Expenses.....	1,017,427 94	759,657 08
	<hr/>	<hr/>
Net earnings.....	381,971 05	353,445 65

The financial condition of the company on June 30, 1880, is exhibited in the following statement of its assets and liabilities:

LIABILITIES.

First-mortgage bonds:		
Missouri Division.....		\$2,283,894 76
Pend d'Oreille Division.....		1,597,939 65
Bills payable.....		489,983 45
Accounts payable.....		915,883 65
Capital stock:		
Common.....	\$49,000,000 00	
Preferred.....	43,412,645 12	
		<hr/>
		92,412,645 12
Surplus, derived from land sales, &c.....		9,350,349 36
		<hr/>
		107,050,695 99
		<hr/>

## ASSETS.

Road, fixtures, and lands .....	\$95,697,159 94
Equipment .....	1,243,531 05
Improvements and betterments .....	979,429 58
Fuel, material, and stores on hand .....	1,894,636 13
Cash .....	401,824 58
Bills receivable .....	1,760 28
Accounts receivable .....	705,268 57
Company's and other stocks and bonds .....	6,127,085 86
Total .....	<u>107,050,695 99</u>

The number of stockholders of this company December 31, 1879, was 8,139, and June 30, 1880, they are reported "about 8,000"; quite a large number compared with that of other important companies, the Texas and Pacific having but 57, the Southern Pacific 36, and the Central Pacific prior to February, 1880, probably not over 50; the Union Pacific (consolidated) had 1,509 on June 30, 1880, a much larger number than ever before, and composed of a goodly number of small holders who had evidently taken stock for permanent investment purposes. The number of shares of the Northern Pacific outstanding September 30, 1880, being 934,126, and the votes cast for election of directors being but 355,967, shows that but little more than one-third of the stock was voted at the annual election. This is, or has been, at least, in all probability, one of the main causes of the apparent lack of energy on the part of this company during the years immediately following the reorganization of the company September 29, 1875.

Referring to these matters leads to some reflections in regard to the general policy of the company in the past and present. The property which came into possession of the company by purchase August 25, 1875, under foreclosure, and by which they acquired all the rights and franchises of the corporation created by act of Congress approved July 2, 1864, was 530 miles of railroad in operation and an undivided one-half interest in 24 miles from Duluth to Thomson, Minn., together with all the equipments and other property; that is, a railroad from Duluth to Bismarck, and another from Kalama to Tacoma, in Washington Territory. In the interval between September, 1875, and September, 1879, four years, but 31 miles of railroad were constructed by the company, and that merely a coal-branch, which, by reason of a questionable selection of a mining engineer, has been practically without business or profit! In addition to this, the company had leased the Saint Paul and Brainerd line, 136 miles, making the total road operated 691 miles, and that also up to the 30th of June, 1880! It is matter of surprise that the opportunity for occupying the country now held by the Saint Paul, Minneapolis and Manitoba Company was not seized by this company; that the company did not at the very earliest moment make good, by its control of the Saint Paul and Pacific stock, its connection with Saint Paul; that it did not promptly take in the situation, and build its road from both Tacoma and Portland to Ainsworth!

Congress, by joint resolution, approved May 31, 1870 (16 Statutes, 378), gave the company authority to mortgage its entire property—"its property and rights of property of all kinds and descriptions, real, personal, and mixed, including its franchise as a corporation." Yet, with this great authority to hand, the company has, to within a period quite recent, failed to appreciate its opportunities, and has been placing piecemeal mortgages upon its property, a plan which, in view of the possibilities open to this great enterprise, cannot be considered as anything short of obstructive and complicating.

A prime necessity, both for the company and for the country through which its railroad has been located in Washington Territory and Oregon, is the immediate construction of its line eastward through the Cascade Range, and westward from Ainsworth down the valley of the Columbia, on its south bank, to Portland. The line to Ainsworth from Tacoma will open up the lumber country and the coal lands for the use of the wheat-growing communities centering at Walla Walla and other points, while the products of that country will find their export on the Sound. No rivalry as between the Sound and Portland should be permitted to interfere with the construction of both these lines. There will be business enough for all; and as the company builds its road eastward, with a base of supplies at Tacoma, the transportation will always be at hand, and the profit of it, if any, go into their own coffers. That any other policy was adopted, especially such a one as building east from Ainsworth and depending upon the navigation of the Columbia River, with its innumerable difficulties and delays, was hardly short of being suicidal, or of placing themselves entirely under the control of a rival company.

It is assuring, however, to know that a new departure has been taken under the vigorous leadership of the present able presiding officer of the company, and that the most energetic means will be adopted to push the whole work with vigor during the coming year. Congress having given the company the right to mortgage all its property and rights of property, which it would seem, beyond question, must include the lands granted, reserving only the right "to alter and amend" (not to repeal), and that with "due regard to the rights of said company, and any other parties," will hardly be disposed to interfere in any way with the work of completion of this great undertaking.

In view of the absolute security afforded to bondholders of the Missouri and Pend d'Oreille divisions by virtue of the large land grant, in addition to the railroad property itself, the credit of the company should have been better than to have necessitated the donation of 74 per cent. (!) of preferred stock at par value, in placing the loan of \$2,500,000 each on those two divisions. The six per cent. bonds of this company, secured by a first mortgage on the entire property, with a sinking fund provided from the sales of lands, ought to command the attention of capitalists at par. The later issues of bonds have been taken at 95 and interest without any preferred stock.

The company complains of the non-fulfillment of the stipulations in the charter in regard to prompt surveys of the lands through which the road is built. Section 6 of the charter act (15 Statutes, 369) says: "The President of the United States shall cause the lands to be surveyed for forty miles in width on both sides of the entire line of said road, after the general route shall be fixed, and as fast as may be required by the construction of said railroad." Surveys must precede settlement and sales, both of the government and company lands.

In conclusion, as regards the present management of the Northern Pacific—their methods both of operation and accounting—it is due the company to say that nothing has been withheld from this office, and that no other company is believed to have a straighter or a more honest and honorable record than their books exhibit.

#### THE ATLANTIC AND PACIFIC RAILROAD COMPANY.

This company has been reorganized, or rather revitalized, and has begun the construction of their railroad from Albuquerque, N. Mex., westward.

Fifty miles of the railroad are completed and ready for the examination of the commissioners to be appointed by the President of the United States for that purpose.

From the fact that a period of eight years had elapsed since the construction of any portion of this railroad, you were pleased to direct that the question of appointment of commissioners to examine the newly-constructed railroad and the collateral questions of acceptance of the road, and of patenting lands earned by the company, be submitted to the honorable the Attorney-General for his opinion. The opinion of the Attorney-General is given in Appendix D of this report, in which it is held—

That the grant to the railroad has not been forfeited by its failure to build its road within the time named in the act, no action by reason of its failure to perform its conditions having been taken by authority of Congress. It having, then, a present grant, even if it be treated as one liable to forfeiture, it has still a right to proceed to construct the road; and until, in some form, advantage shall be taken of the breach of the conditions, it would be the duty of the Executive Department to give it the benefit of the grant.

Also—

That it would be within the power and duty of the Executive to appoint commissioners to examine the section of road submitted by the Atlantic and Pacific Railroad Company, to accept the same if completed in all respects required by the act of July 27, 1866, and to cause patents to be issued to said company for lands situated opposite to and coterminous with the section of road if completed.

SAINT LOUIS AND SAN FRANCISCO RAILWAY COMPANY.

A portion of the original Atlantic and Pacific Railroad is now owned and operated by the Saint Louis and San Francisco Railway Company, and was inspected during the current year. The property was found in reasonably good condition, some 130 miles of the road being laid with steel rails, a considerable portion of the whole road being ballasted with broken stone or gravel, the bridges and masonry being in good order generally, and the equipment in good repair and supplied with “Westinghouse” air-brakes and “Miller” platforms for passenger service, a more detailed report of which is given by the engineer.

The business of this company, consisting chiefly of Texas traffic and the transportation of ore from the mining country through which its road runs to Saint Louis, has increased wonderfully during the past year. For the years ending June 30, 1880, and 1879, as shown more in detail in Table No. 11, the gross and net earnings have been as follows:

Fiscal years—	Gross earnings.	Net earnings.
1880.....	\$2, 259, 564 57	\$1, 252, 863 69
1879.....	1, 183, 346 96	575, 734 77
Increase 1880 over 1879.....	1, 076, 217 61	677, 128 92

And for the nine months ending September 30, 1880, and 1879:

Nine months—	Gross earnings.	Net earnings.
1880.....	\$1, 857, 337 21	\$931, 276 83
1879.....	1, 032, 019 57	536, 928 10
Increase .....	825, 317 64	394, 348 73

## OTHER ROADS INSPECTED AND REPORTED ON.

Among the other properties inspected during the year are those of the Oregon and California, the Oregon Central, the Missouri, Kansas and Texas in Kansas, the Atchison, Topeka and Santa Fé, and the Saint Paul and Duluth Railroad Companies, details of which will be found in the report of the engineer. That portion of the Southern Pacific termed Northern Division, and not operated by the Central Pacific, was not examined in detail.

## SOUTHERN PACIFIC RAILROAD, NORTHERN DIVISION.

The following statements exhibit the earnings and expenses of the Northern Division of the Southern Pacific Railroad, and the financial condition of the company:

*Southern Pacific Railroad Company.*

(Year ending June 30, 1880.)

RECEIPTS.		
Passenger earnings.....	\$399,349 34	
Freight earnings.....	455,382 51	
Mail earnings.....	11,865 76	
Express.....	12,250 56	
Miscellaneous.....	23,478 31	
Gross earnings, Northern Division.....		\$902,326 48
Profits on investments.....	348,964 93	
Receipts of land department.....	108,786 26	
		457,751 19
Total receipts.....		1,360,077 67
Rental paid by Central Pacific Railroad Company.....		1,632,544 93
Total.....		2,992,622 60
EXPENDITURES.		
Conducting transportation.....	\$205,925 89	
Maintenance of way.....	135,742 44	
Motive power.....	143,598 72	
Maintenance of cars.....	40,130 68	
General expenses and taxes.....	231,286 15	
Total operating expenses, Northern Division.....		756,683 88
Interest on first-mortgage bonds.....	1,751,160 00	
Interest on other debt.....	121,320 39	
Expenses of land department.....	25,447 26	
Renewals on leased lines.....	859 52	
New construction.....	62,491 26	
New equipment.....	59,260 57	
		2,020,539 00
Total expenditures.....		2,777,222 88
Surplus income.....		215,400 72

*Southern Pacific Railroad Company.*

(June 30, 1880.)

LIABILITIES.		
First-mortgage bonds.....	\$28,872,000 00	
Interest due and unpaid.....	219,450 00	
Interest accrued.....	433,080 00	
Pay-rolls and vouchers.....	60,874 86	
Accounts payable.....	493,940 21	
Capital stock.....	36,763,900 00	
Total.....		66,843,245 07



## ASSETS.

Road and fixtures.....	\$62,307,813 98
Equipments.....	1,848,533 51
Real estate.....	611,295 74
Fuel, materials, &c.....	111,086 49
Cash.....	3,532 72
Stocks of other companies .....	425,000 00
Due from United States.....	3,100 14
Bills receivable.....	30,000 00
Accounts receivable.....	586,152 76
Total.....	65,926,515 34
Deficit to date.....	916,729 73
	<u>66,843,245 07</u>

During the year the company has kept the property in good condition and has acquired possession of a branch road extending from Castroville to Monterey, at which latter point—on the Pacific Ocean—a magnificent hotel for summer resort has been built and opened. The business of this road has remained much the same as it was in the previous year, California not having as yet participated in the increased business activity of the country at large. Table No. 11 shows the earnings and expenses of this company for various periods.

## OREGON AND CALIFORNIA AND OREGON CENTRAL RAILROADS.

The property of these companies is reported on in detail by the engineer. The Oregon and California Railroad has a grant of lands from Portland south to the boundary of the State of Oregon, and the design was that it should there connect with the Oregon branch of the Central Pacific, previously known as the California and Oregon Railroad. Both of these roads, the one in Oregon and the one in California, are unfinished, and, owing to the circuitous line proposed in the maps of general route, they have not been accepted by the department, and no lands have been withdrawn north of Redding in California or south of Roseburg in Oregon, a distance probably of 300 miles. Furthermore, the time for the completion of the roads has expired.

The principal business of these roads, the Oregon and California and Oregon Central, is the transportation of wheat, flour, and wood northward, but the failure of crops in the Willamette Valley in recent years and the consequent migration have so reduced their business that it has been quite a difficult matter to earn enough money to keep the property in repair.

The earnings and expenses are given in the tables attached to this report, as well as other information in regard to the condition of the property and the financial condition of the company.

## MISSOURI, KANSAS AND TEXAS RAILWAY.

At the time of inspection this road, including 183 miles of land-grant railroad in Kansas, was operated by the Union Trust Company of New York, trustees.

The Kansas property was found in good condition generally—bridges in good repair and properly supplied with guard rails and floors; road-bed and track well kept up, passenger equipment fitted with Miller platforms and Westinghouse air-brakes, and shops and other buildings at Parsons substantially constructed and in good repair.



The business of this company consists chiefly in the transportation of grain, live stock, lumber, coal, and cotton, and is likely to be very large in the near future.

The comparative statement of earnings and expenses, details of which are given in Table No. 11, shows the following results:

NINE MONTHS ENDING SEPTEMBER 30.

	Gross earnings.	Net earnings.
1880.....	\$3,025,774 74	\$1,588,806 05
1879.....	2,188,568 08	931,786 40
Increase 1880 over 1879.....	837,206 66	657,019 65

YEAR ENDING JUNE 30.

1880.....	\$4,082,322 92	\$2,158,324 20
1879.....	2,978,735 06	1,129,265 97
Increase 1880 over 1879.....	1,103,587 86	1,028,958 23

THE ATCHISON, TOPEKA AND SANTA FÉ RAILROAD.

This road from Atchison to Pueblo was partially inspected in the month of May last, but owing to the lack of facilities afforded for examining the property, it became a very unsatisfactory inspection. This is the more to be regretted for the reason that the line is an important link in the new trans-continental route.

The road subsidized extends from Atchison to the western boundary of Kansas; but the company operates and virtually owns and controls 844 miles of other railroad. This company has also taken part in the construction of the Atlantic and Pacific Railroad west from Albuquerque, N. Mex., and is building an extension from Albuquerque southward into Mexico, the objective point of which is Guaymas on the Gulf of California.

The maximum grade of the main line in Kansas is 63.7 feet, the sharpest curve is 6 degrees, and about 388 miles of the 471 are tangent.

The number of ties to the mile is below the requirements of the department, and the road should not have been accepted in such condition—the weight of rail used, 56 pounds, requiring 2,640 ties to the mile in good practice. Renewal of ties has not been sufficient, there being a good many rotten ties still in the road.

The iron is badly worn in many places and large renewals will be necessary in a short time. That portion of the road between Atchison and Topeka, on which the traffic is light, has been allowed to run down, and is rough and in general bad order. The road west of Topeka is in better order and has quite a considerable portion laid with steel.

The bridges on the road appear to be in good condition, and many of them have well-laid oak floors and guard-rails.

The engine-houses, shops, water-tanks, coal-chutes, and other buildings are in fair condition, and the equipment is kept in good order. Passenger-cars are fitted with "Westinghouse" automatic brakes and "Miller" platforms.

The business of the company is principally the carrying of grain, coal, lumber, and live stock. Two-thirds of the freight traffic is westward.

Detailed comparative statements of the earnings and expenses are given in Table No. 11, which show an extraordinary improvement, of which the results are as follows:

Fiscal years ending June 30—	Miles.	Gross earnings.	Net earnings.
1880.....	1,190	\$7,362,790 66	\$4,168,304 17
1879.....	852	5,195,308 64	2,650,522 87
Increase 1880 over 1879 .....	338	2,167,482 02	1,517,781 30

Of a total tonnage carried, amounting to 872,025, 170,138 tons were construction and railroad material, and 8,431 tons were government freight.

The company reports 1,158,083 acres of land sold to June 30, 1880, and 1,480,370 remaining unsold. Sales of land to same date have amounted to the sum of \$5,802,955.98, or an average price of \$5.0275 per acre.

The financial condition of the company on December 31, 1879, is shown by the following statement:

#### LIABILITIES.

First-mortgage bonds.....	\$7,041,000 00
Interest on same ..	248,377 50
Other bonded debt .....	7,173,500 00
Interest due and accrued .....	50,815 54
Bills payable.....	333,760 04
Accounts payable.....	1,159,255 51
Pay-rolls and vouchers .....	769,946 39
Due other companies .....	115,059 88
Dividends unpaid ..	379,173 00
Capital stock .....	12,634,400 00
	<hr/>
	29,905,287 86
Surplus, or credit to income account .....	2,080,693 67
	<hr/>
	31,985,981 53
	<hr/>

#### ASSETS.

Road and fixtures .....	22,482,061 05
Equipment .....	2,583,239 36
Fuel, materials, &c .....	385,542 02
Cash .....	378,662 17
Company's stock and bonds.....	145,822 06
Other stocks and bonds.....	2,239,789 55
Due from the United States.....	201,741 62
Bills and accounts receivable .....	3,066,353 89
Due from other companies.....	48,250 51
Miscellaneous investments.....	454,519 30
	<hr/>
	31,985,981 53
	<hr/>

#### SAINT PAUL AND DULUTH RAILROAD COMPANY.

The road of this company extends from Saint Paul to Duluth, Minn., 156 miles, of which the Northern Pacific Railroad Company owns an undivided half interest in 24 miles, from Duluth to Thomson.

The engineer reports the line as badly located in detail, with sharp reversions, grades heavy, track out of line, joints down, and splices loose.

Between Duluth and Thomson are five very high trestle-bridges, three

of which have been rebuilt during the year. All bridges on this road are provided with guard-rails.

Passenger equipment is supplied with "Miller" platforms and "Westinghouse" automatic brakes.

The company is expending large sums in maintenance, as shown by the detailed reports given in the tables accompanying this report.

#### THE TABLES ATTACHED TO THE REPORT.

The tables placed after the appendixes have been carefully prepared from the reports rendered by the companies, and from such other sources as were attainable. Table No. 1 gives the organization—names of companies, date of charter or consolidation, names of companies consolidated with, previous incorporation, miles of road owned, roads leased, controlled, or operated, giving names, miles, and terms, and total miles operated; Table No. 2 gives the ownership—names of companies, number of stockholders, par value of stock, capital stock authorized, capital stock subscribed, capital stock issued, total issued and owned by company; Table No. 3 gives the names of officers of the several companies, president, secretary, treasurer, general executive officer, and general accounting officer; Table No. 4 gives the characteristics of roads; Table No. 5 gives cost of property and character of equipment; Table No. 6 gives statistical information in regard to the bonds issued by the subsidized Pacific Railroad companies; Table No. 7 gives liabilities and assets of the companies which have rendered reports; Table No. 8 gives revenue as reported; Table No. 9 gives expenditures as reported; Table No. 10 gives operations of land departments; and Table No. 11, comparative statements of earnings and expenses.

#### CONGRESSIONAL PROCEEDINGS AFFECTING THE PACIFIC RAILROADS, AND RECOMMENDATIONS FOR LEGISLATION.

During the second session of the Forty-sixth Congress, which adjourned June 16, 1880, two bills were introduced which specially affected the subsidized Pacific Railroad companies—H. R. Nos. 4233 and 4588.

The bill No. 4233 was reported to the House February 5, 1880; was read twice, recommitted to the Committee on the Pacific Railroad, and ordered to be printed. The bill is virtually a series of amendments of the sinking-fund law of May 7, 1878, making the following changes:

First. By section 3 of the bill the Secretary of the Treasury is authorized to invest the sinking fund in "bonds of the United States or in the first-mortgage bonds of said companies, respectively, as the Secretary may prefer." The question of investment in the first-mortgage bonds of the companies was debated in the House on April 19, 1880 (Congressional Record, April 12, 1880, pages 9-13). The law now requires the sinking fund to be invested "in bonds of the United States. \* \* \* And in making such investments the Secretary shall prefer the five per centum bonds of the United States, unless, for good reasons appearing to him, and which he shall report to Congress, he shall at any time deem it advisable to invest in other bonds of the United States." The "5 per cent. bonds" of the United States are redeemable in 1881; the "currency sixes" are bearing a premium of from 30 to 35 per cent.; and the "four per cents" are worth 112; while the first-mortgage six per cent. bonds of the companies are selling at 114. The sinking fund is to be used *first* in payment of the first-mortgage bonds (section 8, 20 Statutes, 56). "Only one-half of the compensation for services shall be required to be

applied to the payment of the bonds issued by the government in aid of the construction of said roads" (section 5, 13 Statutes, 356). The other half, therefore, which is credited to the sinking fund, is the company's money.

Second. By section 4 the time for crediting to the sinking-fund amounts found due the companies is changed from *February first in each year*, to the *date of settlement by the accounting-officers*; *semi-annual settlements* with the companies are provided for, instead of *annual settlements*; the time for payment of moneys by the company is changed from *February first in each year*, to *April first and October first*—the time for settling, thirty days, being too short; and the same section provides proportionately similar sinking-funds for the Kansas Pacific, Sioux City and Pacific, and Central Branch Union Pacific companies.

The changes in regard to the practical work under the sinking-fund law are necessary and just. As to the creation of sinking-funds for the other three companies named, it is for Congress to determine.

Third. Section 5 provides—

That the Secretary of the Treasury be, and he is hereby, authorized to transfer to the sinking-fund established by this act, out of any moneys in the Treasury of the United States due to either of said railroad companies, respectively, for services and not lawfully retainable on account of interest on bonds issued to said companies by the United States, or on account of five per centum of net earnings, such sums as may be required under the provisions of this act to be paid by said companies, respectively, into the Treasury to the credit of said sinking-fund; and all laws inconsistent with the provisions of this section so far as relates to the said companies are hereby repealed.

This section is necessary in order that the sinking-fund may obtain its proper credits, large sums of money being payable to the companies for services on unsubsidized railroads, but which they are willing to have applied as a cash payment by them; otherwise the money will have to be paid to the companies and then the companies repay the money into the Treasury for credit to the sinking-fund. It is simply a matter of bookkeeping; the courts having decided that only the subsidized road is liable to the "five per cent." of net earnings.

The bill No. 4588 was reported to the House February 18, 1880, read twice, recommitted to the Committee on the Pacific Railroad, and ordered to be printed. The following sections of this bill are now recommended for legislative action:

SECTION 1. That the title "Commissioner of Railroad Affairs" shall be, and is hereby, substituted for that of "Auditor of Railroad Accounts" in section two of said act of Congress approved June nineteenth, anno Domini eighteen hundred and seventy-eight; and in all other sections of the said act the title "Commissioner" shall be, and is hereby, substituted for that of "Auditor."

SEC. 2. That the Secretary of the Interior shall appoint in the office of the said Commissioner of Railroad Affairs one railroad engineer at an annual salary of three thousand dollars, and the duties of said railroad engineer shall be to inspect the properties of the railroad companies named in the said act, as often as may be required, and to make a report thereon to the said Commissioner on the first day of November in each year.

SEC. 3. That the several departments of the government for which the Union Pacific, Central Pacific, Kansas Pacific, Central Branch Union Pacific, and Sioux City and Pacific Railroad Companies shall have performed, or may hereafter perform transportation service of any kind, including the transportation of the mails, are hereby required, after the accounts for said transportation have been examined and approved in the respective bureaus of the several departments for which the service has been performed, to forward the said accounts to the proper accounting-officers of the Treasury through the Commissioner of Railroad Affairs; and any and all disallowances or differences found in the said accounts by the accounting-officers of the Treasury shall be reported to the said Commissioner for his information.

SEC. 4. That the Commissioner of Railroad Affairs be, and is hereby, required, within a reasonable time after he shall have received the reports of the accountin-

officers referred to in the preceding section, to report to the Secretary of the Treasury for his information any facts affecting their correctness or the proper disposal of the moneys found due to said railroad companies respectively.

SEC. 5. That all transportation accounts rendered to the several departments of the government by the railroad companies named in section three of this act be, and the same are hereby, required to be delivered to the accounting officers of the Treasury within thirty days from the date of receipt of the same; and the said accounting officers are hereby required to have the said accounts settled and reported on as provided in section three of this act within thirty days after the said accounts have been received by the said accounting officers.

SEC. 6. That section thirteen of the act approved July twenty-seventh, eighteen hundred and sixty-six, United States Statutes at Large, volume fourteen, page two hundred and ninety-seven, so far as the same relates to reports to be rendered by the Atlantic and Pacific Railroad Company to the Department of the Interior be, and is hereby, repealed.

SEC. 7. That section thirteen of the act approved March third, eighteen hundred and seventy-one, United States Statutes at Large, volume sixteen, page five hundred and seventy-seven, relating to reports to be made by the Texas and Pacific Railway Company to the Department of the Interior be, and is hereby, repealed.

SEC. 8. That the office of government director of the Union Pacific Railroad be, and the same is hereby, abolished.

SEC. 9. That the several departments of the government are hereby authorized and empowered to enter into contracts or agreements with such of the companies or persons who own or operate the aforesaid railroads respectively or with any other railroad company or common carrier as may choose so to do, for the transportation of freight and passengers at some average and reasonable rate per passenger per mile and per ton of freight per mile regardless of classification: *Provided*, That in no case shall said average rates be greater than the average rates received by said companies respectively for the fiscal or calendar year immediately preceding that for which said contracts or agreements may be entered into: *And provided further*, That said contract rates shall be subject to all lawful conditions now in force in regard to any railroad or railroad company.

SEC. 10. That the Secretary of the Treasury be, and he is hereby, authorized, out of any moneys in the Treasury of the United States not otherwise appropriated, to pay to said railroad companies, respectively, such sums as may be found due to them for one-half of the compensation for services rendered for the government and not retainable on account of five per centum of net earnings, subject to the provisions of the act of Congress entitled "An act to alter and amend the act entitled 'An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the government the use of the same for postal, military, and other purposes,' approved July first, anno Domini eighteen hundred and sixty-two, and also to alter and amend the act of Congress approved July second, anno Domini eighteen hundred and sixty-four, in amendment of said first-named act," approved May seventh, anno Domini eighteen hundred and seventy-eight, and of all acts amendatory thereof.

SEC. 11. That this act shall be taken to be and shall be in amendment of the act of Congress entitled "An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the government the use of the same for postal, military, and other purposes," approved July first, anno Domini eighteen hundred and sixty-two, and of the act of Congress approved July second, anno Domini eighteen hundred and sixty-four, in amendment of said first-named act, and of all other acts amendatory thereof, and of the aforesaid act approved June nineteenth, anno Domini eighteen hundred and seventy-eight, in so far as their provisions are inconsistent with the provisions of this act; and in so far as the provisions of any of the aforesaid acts, or of any other act of Congress, are inconsistent with the provisions of this act the same are hereby repealed.

SEC. 12. That this act shall take effect from and after the date of the passage thereof.

As to this proposed legislation, of both bills, the reasons upon which it was urged in my last annual report (pages 50 to 54) apply now, but much more forcibly.

In regard to the land-grant railroads on which the United States is entitled to transportation of troops and supplies "free of toll or other charge," some legislation similar to that embodied in the sundry civil appropriation act approved March 3, 1879, is required. The decision of the Court of Claims in the "Atchison, Topeka and Santa Fé" case is given in Appendix M. In accord with this decision and the previous action of Congress, it is recommended that sufficient appropriation be made to



enable all of these companies to be paid *fifty per centum* of their ordinary charge for government transportation, with a proviso *that, if accepted, it be in full of all demands and claims upon the government for such service.* No doubt many of the companies would prefer settlement in this way rather than be subjected to the tedious process of the courts, where a final decision may not be reached for some years, and more especially for the reason that the land-grants are growing more valuable, those at least of the companies whose lands are not mainly disposed of.

As a matter probably affecting the Pacific Railroads more than any other, by reason of their great length and passing through so many States and Territories, it is further recommended for the consideration of the law-making branch of the government that, in view of the widespread demand for some legislation to prevent discriminations in the charges made by common carriers for the transportation of merchandise between the States, or what is generally termed "inter-State commerce," and the full and protracted discussions of the subject which have been had in Congress and before committees during the last two sessions, that the act of Congress approved June 15, 1866 (14 Statutes, 66, now section 5258 Revised Statutes), entitled "An act to facilitate commercial, postal, and military communication among the several States," and in which Congress reserved the right "at any time to alter, amend, or repeal," be amended so as to provide as follows, namely:

First. For some plain and uniform system of reports from all companies doing inter-State business.

Second. For a special report in regard to accidents on railroads and railroad trains, giving deaths and injuries, &c.

Third. For a special commission, composed of a judicial officer, an engineer, and a business man, to investigate the facts connected with every accident attended with death of any passengers; and

Fourth. That all common carriers engaged in transporting passengers and freight from one State or Territory to another State or Territory of the United States are hereby authorized to charge and receive for said service such compensation as they may fix from time to time: *Provided*, that no discrimination of any kind whatsoever shall be made; that like possible service and facilities shall be furnished on the same day at the same price for all freight offered; and in case any common carrier evades or breaks this provision, the party injured shall have his remedy in any United States district or circuit court having jurisdiction.

#### THE PERSONNEL AND EXPENSE OF THE BUREAU.

Since the close of the fiscal year Mr. Southwick Guthrie has resigned his position as "bookkeeper," Mr. August Duddenhausen has resigned his position as "assistant bookkeeper," both having obtained more lucrative positions, and it is feared that the inadequate pay attached to the office of railroad engineer will not enable the services of Mr. Aurin B. Nichols to be retained longer than the first of January next. These positions are very difficult ones to fill at the salaries, owing to the complicated and varied nature of the work and the necessity of having experienced men—such men as can command from railroad and commercial companies much higher salaries than the government seems willing to pay.

The following-named persons were employes of this office on June 30, 1880:

	Annual salary.
Theos. French, Auditor .....	\$5,000
Southwick Guthrie, bookkeeper .....	2,400



	Annual salary.
Aurin B. Nichols, railroad engineer .....	\$2,000
August Duddenhausen, assistant bookkeeper .....	2,000
Miss E. W. Rogers, clerk .....	1,400
Miss Katie Schmidt, copyist .....	720
Albert S. Seeley, copyist .....	720
C. M. Chapman, messenger .....	300

On this day, November 1, 1880, the *personnel* is as follows :

	Annual salary.
Theos. French, Auditor .....	\$5,000
August Duddenhausen, bookkeeper .....	2,400
Aurin B. Nichols, engineer .....	2,000
William M. Thompson, clerk .....	1,800
Miss E. W. Rogers, clerk .....	1,400
John B. Fay, clerk .....	1,200
Miss Katie Schmidt, copyist .....	720
Albert S. Seeley, copyist .....	720

Of the appropriations for this office for the fiscal year ending June 30, 1880, in all amounting to \$14,800, the following sums have been expended, viz: Salaries, \$12,293.56; traveling and incidental expenses, \$2,442.40; in all, amounting to \$14,735.96.

The appropriations for the office for the current fiscal year ending June 30, 1881, are as follows: "Salaries, office of the Auditor of Railroad Accounts: for Auditor, \$3,600; bookkeeper, \$2,400; assistant bookkeeper, \$2,000; railroad engineer, \$2,000; one clerk, \$1,400; one copyist, \$900; one messenger, \$600=\$12,900. Contingent expenses, office of the Auditor of Railroad Accounts: Traveling and other expenses, \$2,500; incidental expenses, \$300=\$2,800;" in all, amounting to \$15,700.

The estimates which have been submitted for the fiscal year ending June 30, 1882, are as follows: Salaries; for Auditor, \$5,000; bookkeeper, \$2,400; assistant-bookkeeper, \$2,000; railroad engineer, \$2,000; one clerk, \$1,600; one clerk, \$1,400; one copyist, \$900; and one messenger, \$600=\$15,900. Contingent expenses: Traveling and other expenses, \$2,500; incidental expenses, \$300=\$2,800; making, in all, \$18,700.

It affords me pleasure to acknowledge the ability, industry, and application with which my subordinates have performed their duties.

I have the honor to be, sir, very respectfully, your obedient servant,  
THEOS. FRENCH,  
Auditor.

The Hon. SECRETARY OF THE INTERIOR.

## REPORT OF RAILROAD ENGINEER.

DEPARTMENT OF THE INTERIOR,  
Washington, D. C., November 1, 1880.

SIR: The following is a report of inspections of railroads included in the act of Congress approved June 19, 1878, establishing the office of Auditor of Railroad Accounts, made since the date of my last annual report:

During this period two inspection trips have been made.

The Baltimore and Ohio Railroad, having been adopted by act of Congress as a standard whose maximum grades and maximum degree of curvature shall not be exceeded by subsidized and land-grant roads, it was deemed desirable to make a trip over that road. The courtesy of the officers of the Baltimore and Ohio Company enabled this to be

done under very favorable circumstances, and Mr. W. N. Bolling, civil engineer for the company, was detailed to accompany us. I desire to acknowledge his courtesy in giving information and pointing out items of interest.

The first trip of inspection was made in April, May, and June of this year, embracing a period of a little over two months. It included the above-mentioned examination of the Baltimore and Ohio Railroad, an inspection of the Saint Louis and San Francisco Railway and line leased by it from the Atlantic and Pacific Railroad Company in the Indian territory; the land-grant portion of the Missouri, Kansas and Texas Railway; the Atchison, Topeka and Santa Fé Railroad; the Visalia division of the Central Pacific Railroad; that portion of the Southern Pacific Railroad that is leased to the Central Pacific Railroad Company, and its branches; the Southern Pacific Railroad Company of Arizona; the Pacific, and a portion of the Pend d'Oreille divisions of the Northern Pacific Railroad; the Oregon and California Railroad, and the Western Oregon Railroad, including the line of the Oregon Central Railroad which is operated under lease by the Western Oregon Company.

The second trip was made in August and September, and embraced a period of nearly six weeks. On this trip an inspection was made of the eastern divisions of the Northern Pacific Railroad; the Saint Paul and Duluth Railroad; the Sioux City and Pacific Railroad; the subsidized and land-grant portions of the Union Pacific Railway, and also its Utah and Northern and Summit County branches; the Central Branch Union Pacific Railroad, and the subsidized line of the Central Pacific Railroad. The inspection of the Central Branch Union Pacific was made by proxy, owing to my severe illness.

On these two journeys, in addition to the aforementioned, the following-named land-grant roads were passed over in the regular trains, but no special inspection made, viz: The Cedar Rapids and Missouri River Railroad (leased to the Chicago and Northwestern Railway Company), the Chicago, Saint Paul and Minneapolis, and the Saint Paul and Sioux City Railroads (now forming a part of the Chicago, Saint Paul, Minneapolis and Omaha line); the Missouri Pacific Railway, main line, and the Southern Pacific Railroad, northern division. The following-named unaided lines leased by subsidized or land-grant roads were also passed over, viz: The Pueblo and Arkansas Valley Railroad; the California Pacific Railroad, between Sacramento and Suisun; the Northern Railway, between Oakland and Suisun, and the San Pablo and Tulare Railroad.

As the Denver and Rio Grande Railway, and the Denver, South Park and Pacific Railroad are important factors in the transportation question in Colorado, an excursion was made over a portion of each of their lines.

The abundant crops of the past three years have largely increased the earnings of the railroads. The drought in Western Kansas and Nebraska has somewhat affected the business of the roads in that region, but generally speaking, the crops have been good, and the acreage greatly increased over former years.

A very noticeable feature on many western roads has been the more thorough and efficient condition in which the equipment, especially that pertaining to passenger traffic, has been maintained, as compared with the way and its appurtenances. It is gratifying to notice that the recent increase in prosperity has enabled many companies to expend considerable sums in improving the condition of their roadway and structures. This improvement consists not merely of renewals in kind, but

also in the substitution of permanent structures for those of a temporary character, and of steel rails for those of iron. There is still room for much improvement, especially in the drainage and ballasting of road-bed, and the policing of line and yards.

As an indication of the rapidity with which this western country is being developed, it may be proper to state, that out of a total of about four thousand (4,000) miles of track, laid in the first nine months of the current year, over twenty-six hundred miles are west of the Mississippi River.

In my last report, the adoption of efficient bridge floors, provided with proper guard rails, so as to reduce the danger from derailed trains to a minimum, was especially urged for the roads reported on which were not already thus equipped. Before my report went to the press the accident at Saint Charles bridge over the Missouri River occurred. The coroner's jury in the case report that "the railway company or owners of the bridge are responsible for the fatal result of the disaster in allowing the floor timbers to remain in the bridge so long that they became deteriorated," and "we further consider that the floor system of the bridge in use at the time of the accident, while in accordance with approved practice at the time of its construction, was not altogether safe, and it lacked the necessary precautions against disaster resulting from derailed cars."

I find reports of thirteen different accidents which have occurred in the United States during the eighteen months ending June 30, 1880, from derailments on bridges, or from defects in the bridge superstructure, occasioning the loss of a number of lives, and the destruction of property of considerable value. There have been without doubt many others of like character, either not reported, or else classed under the head of accidents from "*unexplained causes*." The fall of the Tay bridge in Scotland December 28, 1879, with its attendant loss of life, calls to mind the disasters in this country at Ashtabula, Ohio, December 29, 1876, and at Tariffville, Conn., January 15, 1878. All of these three disasters were occasioned by defects in the structures themselves, either in design, or manufacture, or both.

It is not an uncommon practice in the United States for railroad companies to make contracts with manufacturers for bridges to be constructed from designs furnished by the latter. In many cases the designs are never examined; the material and workmanship are not inspected during the process of manufacture; nor is the structure examined for acceptance after erection by an expert on behalf of the railroad company; and in consequence, bridges are in use whose margins of safety are much less than is called for by the best practice. In some cases which have come to my knowledge the engineer has been overruled by superior authority in order to save in first cost, and bridges have been erected which have had to be removed in a short time on account of manifest weakness.

As relating to the practice of allowing manufacturers to design bridges without expert supervision, I quote the following extract from a letter from Mr. Clemens Herschel, member of the American Society of Civil Engineers, published in the Boston Daily Advertiser January 25, 1877, in which, after commenting on the Ashtabula failure, he says: "There is only one correct way of building bridges or large roofs: a constructing engineer must design the bridge or roof; his plans can be changed in detail until satisfactory to the party that pays for it, and all contractors must bid on that one plan." This, in my opinion, is the correct method, and if universally adopted, with the addition of proper inspection during manufacture and erection, would doubtless prevent numer-

ous accidents from originally defective structures; nor would this practice work any injustice to competent engineers engaged in the manufacture of bridges, as it would effectually protect them from ignorant and unscrupulous competitors.

In connection with this subject of safety of railroad structures, I would mention the great need there is of more experimental information in regard to the behavior of American iron and steel under the various conditions of stress. The importance of tests of this character can scarcely be overrated.

Congress, at its last session, appropriated \$10,000 for the purpose of continuing such tests, and it is to be hoped that liberal appropriations will be made from time to time until they shall be completed.

After the occurrence of the Ashtabula disaster, the subject of governmental inspection of bridges and investigation of accidents was agitated, and communications on the subject from eminent civil engineers appeared in the public prints. Several bills have, at different times, been introduced in Congress on the subject of railroad accidents, but none passed. In Great Britain there is an inspection on behalf of the government by the railway inspectors of the Board of Trade, but the experience at the Tay bridge seems to indicate that the British system is not entirely efficient.

That something should be done to protect life and property from destruction, caused by improperly designed or badly made railroad structures, the numerous disasters of this character seem clearly to indicate.

Another subject which may at some future time be a proper one for the general government to take action on, is that of the uniformity of train signals. It is needless to do more than mention this, as the misunderstandings liable to result from the use of tracks in common, by several companies, on whose lines a given signal on one does not mean the same thing on all, are evident. Cases where such conditions exist are not unknown in this country. If action is to be taken on this matter by the States severally, a long line may find itself obliged by law to use two or more systems of signals, each differing from the other.

There are, doubtless, difficulties attending the establishment of an efficient system of national supervision under our form of government and in our vast territory, but it is believed that they will not be found insurmountable when the proper time for action arrives.

In the following report, the roads have not been taken up in the order in which they were inspected, but, as in my report of last year, they have been considered as far as practicable as follows, viz:

Roads that have been aided with bonds, lands, depot-grounds, right of way, &c., granted by the United States; roads that have been aided with lands, depot-grounds, right of way, &c., granted by the United States; and roads that have been aided with lands, depot-grounds, right of way, &c., granted by the United States to sundry States for that purpose.

### UNION PACIFIC RAILWAY.

The Union Pacific Railway Company was formed January 26, 1880, by the consolidation of the "Union Pacific Railroad," the "Kansas Pacific Railway," and the "Denver Pacific Railway and Telegraph" Companies.

The property is operated in two grand divisions, viz, the Union Division, embracing the line from Council Bluffs to Ogden, and controlled branches; and the Kansas Division, embracing the line from

**Kansas City to Cheyenne, and controlled branches. Each grand division will be considered separately.**

The road owned is:

	Miles.
Council Bluffs to Junction with Central Pacific.....	1,038.452
Kansas City (State line) to Denver.....	638.6
Leavenworth to Junction.....	31.9
Denver to Cheyenne.....	105.89
Total owned .....	1,814.848

The road controlled and operated June 30, 1880, was:

Omaha and Republican Valley.....	132
Omaha, Niobrara, and Black Hills .....	81
Colorado Central.....	184
St. Joseph and Western .....	252
Maryville and Blue Valley.....	38
Summit County.....	8
Utah and Northern.....	304
Carbondale Branch.....	32
Junction City and Fort Kearney.....	70
Solomon Railroad.....	57
Salina and Southwestern .....	36
Boulder Valley.....	27
Golden, Boulder, and Caribou .....	6
Total.....	1,227

Of the line owned, 5 miles are leased to the Central Pacific Railroad Company, leaving the grand total owned and operated June 30, 1880, 3,036.848 miles.

#### UNION DIVISION.—MAIN LINE, COUNCIL BLUFFS TO OGDEN.

Inspection made in August, 1880.

During the year many improvements have been made, which will be noticed in practically the same order as the different items were reported on last year.

#### *Alignment and grades.*

The only change in location I have to notice is at the "Elkhorn Hill." The line between the crossing of the Elkhorn River and Omaha passes over the peninsula between the Platte and Missouri Rivers. As originally located and built, the line after crossing the Elkhorn ran at nearly right angles to the direction of the ridge, and reached a summit in a distance of 7,800 feet. From the Elkhorn Crossing for a distance of 1,000 feet there was a slightly descending grade, then 2,800 feet of level and 4,000 feet of ascending grade of  $79\frac{2}{10}$  feet per mile, combined for a distance of 2,150 feet with a two-degree curve. The maximum grade against the east-bound traffic at any other point on the locomotive division embracing this piece of line is  $39\frac{6}{10}$  feet per mile. This short grade of  $79\frac{2}{10}$  feet per mile has always been a source of great annoyance and expense in operating the road.

The change now in progress, while lengthening the road but little, if at all, reduces the grade to a maximum of 21 feet per mile.

#### *Graduation and masonry.*

There is nothing special to observe in regard to the excavations. One or two shallow cuts have had their slopes flattened, to prevent the lodgment of snow. The low embankments on the Eastern Division,



comprising a large portion of its length, are now of good width; the widening of embankments is in progress at a number of places on the Mountain Division between North Platte and Cheyenne; and a force is engaged on similar work on the Western Division.

The tunnels are in the same condition as at the date of last report, viz, tunnel No. 1 is partially arched with old rails, No. 2 is timbered, and No. 3 and No. 4 are in solid rock. My remarks of last year in regard to bridge masonry will still apply, viz, "the masonry under iron bridges is good, much of it having been rebuilt; where old masonry has been retained it has been repaired." No changes have been made, so far as I am aware, in either boxed or arched culverts.

### *Road-bed and superstructures.*

The road-bed is now of good width throughout nearly the whole length of the eastern division, while on the other divisions, the amount of narrow roadway has been decreased by the widening of embankments.

A much larger number of cuts are well ditched than at the date of my report last year, and improvement has been made in the general appearance of the roadway and track. The improvement in this respect is not, however, uniform over the whole line, but is seemingly more dependent on the roadmasters individually, than upon any regulation of the service. The adoption and enforcement of a uniform standard for the maintenance of road-bed and track would very much improve the appearance of the property, to say nothing of the efficiency of a roadway thus maintained.

The renewals of ties for the five years ending December 31, 1879, have averaged 17 per cent. per annum, and large numbers of new ties are being put in this season.

About one-sixth of the ties used are oak, renewals on the eastern division being made chiefly with ties of this wood.

At the close of the year 1879 there were 485 miles of track laid with steel rails. During the first nine months of the current year, 156 miles have been put down, making a total of 641 miles laid with steel. The weight of steel rail now used is 58 pounds per lineal yard.

The line and surface of track have been much improved on the eastern division, even where the old chair iron rails still remain in the track. On the other division, the track has been maintained in generally good condition, and as a whole, is better than it was a year ago. Some of the curves have been rectified, and minor undulations in the track worked out.

With the exception of those at Omaha and Sidney, the principal yards are in a neat and creditable condition. At Omaha passenger station, the neglect to remove rubbish and refuse thrown from trains, and to keep the passenger platforms swept, is particularly noticeable.

No ballasting has been done during the year, except at a few bad points on the Laramie division, and at some of the yards.

Quite a number of side tracks have been laid. The length now in use is  $211\frac{7}{16}$  miles, or 17 miles more than at the date of my last report, and  $11\frac{7}{16}$  miles more than was reported by the company December 31, 1879.

No change has been made as regards switches, signals, &c., the patterns used remaining the same as last year.

Some barbed-wire fence with iron posts has been put up, but the number of miles has not been reported.

The telegraph line is in good condition.

The company now have in use or in process of erection 18 iron bridges.



The pile and trestle bridges are generally in good repair, quite a large amount of work having been done in renewals and repairs this season.

No change has been made in the floor system on bridges. The floors are wide, the ties laid close and spiked to girders, but no guards are used.

### *Buildings.*

Sheds with wrought-iron skeletons and corrugated iron coverings have been erected over the passenger platforms on the west side of the "Transfer Station" at Council Bluffs. Similar sheds should also be put up over the platforms on the east side. The waiting-rooms and ticket-office facilities at this station are too small for the large business done. Improved sanitary arrangements should also be made for this building. At the date of inspection, the stench from the cesspools was very offensive in the sleeping apartments, and particularly so in the dining-room.

The new station building at Kearney has been put in use, the general repairs on the hotel at Laramie have been completed, and the station buildings at various points have been repaired.

No change has been made by this company in the arrangement of buildings and tracks at Ogden. A union depot large enough to accommodate the extensive business now centering at this point is much needed.

New frost-proof water tanks have been built at Millard, Central City, Alda, Elm Creek, Junction of Greeley Branch, Sidney, Antelope, and Rawlins. These tanks are supported by cast-iron columns, on stone or concrete foundations, and are put up in a substantial and workmanlike manner. The exit pipes should, I think, have been made 6 inches or 7 inches in diameter, instead of 4 inches.

The following additions to shop buildings and machinery have been made, viz: At Grand Island, a rail cutting and punching machine with frame building covering it; at Laramie, new store-houses at the shops and rolling-mill, new spike, bolt, and splice-bar machinery at the latter; and at Evanston, a new boiler shop and some new machinery.

New coal chutes have been put up at Plum Creek.

Snow-sheds remain without change, and snow-fences are in good condition.

The rolling-stock has been well kept and some additions made.

The company has also extended its coal-mining operations during the year.

A branch line from a point near Julesburg to Greeley, Colorado, is in process of construction, and extensions have been made to several of the controlled lines.

Of these controlled lines only the Summit County Railroad and the Utah and Northern Railway have been examined this year.

### *Summit County branch.*

This road was a narrow-gauge line from Echo to Coalville, Utah Territory, where the railroad company has large coal mines. It has been changed to a standard gauge road, and is in process of extension to Park City, Utah, where are located the Ontario silver mines. It is the intention of the company to complete this line during the present season.

At the time of my visit, August 23, 1880, the track was laid for about 9 miles from Echo; the whole distance to Park City being about 23 miles.

*Utah and Northern Railway.*

This is a narrow-gauge (3 feet 0 inches) road, extending at the time of my trip over it, September 3 and 4, 1880, from Ogden, Utah Territory, to Ryan's Cañon, 35 miles beyond Red Rock, Montana Territory, a distance of 339 miles. Since that time it has been extended farther, and is still in progress. It passes through the fertile and well-settled Cache Valley, in Utah, crosses the Bear River, and enters Idaho at Franklin (80 miles); passes over the divide into the Snake River Valley, crosses the Fort Hall Indian Reservation, and reaches the Snake River at Eagle Rock, 207 miles from Ogden. It crosses the river at this point on a wrought-iron "Pratt" truss bridge, of two spans, and follows up the right bank of the river to Market Lake (223 miles), crosses the lava plain to Camas (244 miles), thence ascends the valley of a small stream, passes through Beaver Cañon, reaches waters tributary to the Missouri River, and passes down Red Rock Creek and Beaver Head River to Ryan's Cañon, 339 miles from Ogden, and beyond.

Above Franklin the country is sparsely settled, but it is quite extensively used for grazing.

The road is the outlet for numerous mining camps, and for the whole of Southern Montana, and is doing a large and remunerative business.

It has sharp curves and steep grades.

The rail is 36 pounds per yard, iron, and is laid with plain double-fish joints. The rail is entirely too light for the traffic, the joints are weak, there is no ballast, and consequently the road is very rough, necessitating the movement of trains at very low rates of speed.

A heavier rail should have been used, or, what would have been better, the road should have been made of the standard gauge with 56-pound rail.

The facility of interchange of business with the main line, together with the advantages arising from the better utilization of rolling-stock with a uniform gauge on all parts of the system, and the larger capacity of the standard-gauge road, would doubtless much more than compensate for its slightly greater first cost.

The road-bed is in as good condition as can be expected, considering the short time that has elapsed since the track was laid.

The buildings are nearly all of a temporary character.

The greater portion of the rolling-stock is new, or nearly so, and is consequently in pretty good condition.

Neither safety-couplings nor power-brakes are used.

**KANSAS DIVISION.—CHEYENNE TO KANSAS CITY.**

Inspection made in September, 1880.

The improvement on this division is chiefly in new buildings and the water-supply.

So far as the permanent way is concerned, much of it is in worse condition than at the date of last report, while no special improvement has been noticed anywhere, except on the Cheyenne division.

On the Denver division, Denver to Wallace (219 miles), it has been very difficult to secure laborers, and almost impossible to retain them at the wages paid by the company, and in consequence of insufficient forces the maintenance of way has been neglected.

This has also been the case, though to less extent, on the Smoky Hill division, Wallace to Brookville (220 miles). The drought having spoiled the crops, the settlers have been obliged to work on the railroad to

maintain themselves, relieving to a certain extent the scarcity of labor on this division.

In addition to the above-mentioned cause, both the Denver and Smoky Hill divisions have been visited during the summer by a succession of "cloud-bursts," occasioning numerous wash-outs, and keeping the limited force almost constantly employed.

The remedy for insufficient forces would seem to be, to raise wages enough to attract and retain labor. It is possible, that if the company would make some efficient provision whereby workmen could be comfortably housed and fed at moderate rates in the unsettled region through which the Denver division passes, it might assist in solving this "labor problem"; and perhaps enable them to retain workmen without paying exorbitant rates.

#### *Alignment and grades.*

The report of the company to this office December 31, 1879, states that the maximum grade ascending westward is 76 feet per mile, ascending eastward 94 feet per mile, and sharpest curve ten (10) degrees.

These figures differ from those given in my last report, and are doubtless correct. My figures last year were obtained from data on file in the department. The line was probably constructed with some changes from the data filed, which will account for the discrepancy.

There has been a change of line, and a reduction of grades near Alum Creek, made, I believe, during the last year.

#### *Graduation and masonry.*

A large amount of earth-work has been done in Denver yard, to provide for the rearrangement and extension of tracks and the new buildings.

Very little, if any, widening of embankments has been done, and no new bridge masonry has been reported.

#### *Road-bed and superstructure.*

On the Denver and Smoky Hill divisions, many of the embankments are narrow, and the cuts should be cleared of débris.

On the Kaw Valley division the road-bed is better kept, but no improvement over last year noted. Very little, if any, new ballast has been put in.

There were 119 miles of track laid with steel rails, on December 31, 1879, since which time about 62½ miles have been put down, making a total of about 182 miles. There have also been put down during the current year nearly 37 miles of rerolled iron between Denver and Kansas City, besides some on the Cheyenne division. Large renewals of ties have been made on the Cheyenne division, and renewals are in progress at various points elsewhere.

The track on the Cheyenne division has been much improved in line and surface; on the Denver and Smoky Hill division it has deteriorated in these particulars; while on the Kaw Valley division it has been maintained in about the same condition as it was when inspected last year. As regards switches and signals, there is no change to note. Mile posts have been set up on the Kaw Valley division.

The snow fences need extensive repairs.

The telegraph line is in good condition. Three iron bridges have been erected since December 31, 1879, making the number now in use ten.

The floor has been renewed, some new girders put in, and all of the girders covered with galvanized iron at the bridge over the South Platte on the Cheyenne division.

On the other divisions much work has been done repairing and renewing pile and trestle bridges, and several new openings have been made in consequence of "wash-outs."

### *Buildings.*

The following new structures have been put up on the Cheyenne division, viz: new windmills at Carr, Pierce and Evans, and a stone pump-house, with steam-pump, at Brighton (formerly Hughes). The tank at Evans has been painted. Elsewhere, the following have been noted, viz: at Denver, in connection with the remodeling of the yard, a new stone freight station, with platforms and transfer sheds, large enough to accommodate all the business centering there; a new standard frost-proof tank (with wrought-iron supports on stone foundations); and a coal chute with 28 pockets and storehouse for coal attached, have been built. A stone engine-house, with stalls for 28 engines, is under way, and a commodious union depot, in which the Union Pacific Railway Company has a large interest, will be ready for occupancy in a short time. These structures are all permanent and creditable improvements, and are apparently of sufficient capacity to accommodate traffic for several years to come.

Frame freight-houses have been put up at Box Elder, Hugo, and Buffalo; new standard tanks at Bennett's, River Bend, Arroya, Cheyenne Wells, Cleveland, near Wakeeny, Victoria, Black Wolf, Ellsworth, Salina, and Bismarck; new windmills at tank near Wakeeny and at Salina; new pump-houses at Monument, Cleveland, Victoria, Black Wolf, and Bismarck; new steam-pump at Bismarck; a new combination station at Collyer, and a passenger station at Armstrong; a frame dwelling and a handsome and convenient stone building for superintendent's office at Wallace; new coal chutes at Hugo, Cheyenne Wells, Ellsworth, Brookville, and Wamego, with 4 pockets each at Hugo and Cheyenne Wells, and 12, 24, and 28 at the others, respectively, and new wrought iron turn-tables at Hugo and Ellis. Twelve new tool-houses have been built on the Denver division, and the hotel at Ellis and the engine-house at Manhattan repaired.

Extensions have been made at the Armstrong shops, as follows, viz: additions to boiler, machine, erecting, smith, car, and tin shops, and new oil-house and office.

### *Water supply.*

New wells have been dug at Evans and Pierce, on the Cheyenne division, and at Hugo, Sheridan, Monument, and Cleveland.

### *Equipment.*

During the year 1879, 11 locomotives and 381 cars, of all kinds, were added to the equipment. The "motive power" does not appear to be in as good condition as it was at the time of former inspection, but the other rolling-stock shows no deterioration.

Since my last report 96 miles of extensions have been made to the various controlled lines connected with this grand division.

## CENTRAL PACIFIC RAILROAD.

## SUBSIDIZED LINE, SAN JOSÉ to OGDEN.

Inspection made in August and September, 1880.

On June 30, 1880, this company owned (main line and branches) as follows, viz:

	Miles.
Junction with Union Pacific to San Francisco.....	872.59
San José Branch.....	17.54
Oregon Division.....	151.60
Visalia Division.....	146.08
• Oakland to East Oakland.....	5.67
Oakland to Mastick.....	3.82
Alameda Wharf to Melrose.....	5.19
Fruit Vale Connection.....	2.01
	<hr/>
	1,204.50

## And leased:

Union Pacific.....	5.00
Southern Pacific.....	550.20
Western Development Company.....	.13
Southern Pacific of Arizona.....	293.93
Los Angeles and San Diego.....	27.60
Los Angeles and Independence.....	16.83
Sacramento and Placerville.....	5.64
Stockton and Copperopolis.....	49.00
Amador Branch.....	27.20
Berkeley Branch.....	3.84
Northern Railway.....	112.60
San Pablo and Tulare.....	46.52
California Pacific.....	113.44
	<hr/>
	1,251.93

Total operated.....	2,456.43
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Side tracks on lines owned, June 30, 1880.....	199.14
Side tracks on lines leased, June 30, 1880.....	99.00

Total side tracks.....	298.14
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Since the above-mentioned date the Southern Pacific of Arizona has been extended upwards of 90 miles. The new line from Sacramento to San Francisco, via Benicia, went into operation December 28, 1879, and since that date the through traffic between those points has taken that route.

*Alignment and grades.*

No changes of line or improvement in grades have been made since the date of my last report. There are, however, a number of points between Sacramento and Ogden where a revision of the location would result in a large decrease in operating expenses.

*Graduation and masonry.*

The Secret-town embankment has been raised. At a few remaining points embankments need to be widened, and some of the cuts are still narrow, but much the larger portion of the road-bed is now of good width. So far as I am informed no masonry has been built during the



year. There are a good many small girder bridges, the masonry of which is in a shaky condition, and should be rebuilt.

As noted in my former report masonry abutments should be constructed at the larger bridges on the mountain, and the temporary trestle approaches done away with. No work, other than for maintenance, has been done at the tunnels.

*Road-bed and superstructure.*

With the exceptions noted under "Graduation and masonry," the road-bed is of good width, and both it and the track have been well maintained. The road-way is gradually being brought up to a uniform standard, old material along the line is promptly gathered up and removed, and the yards and station-grounds kept in a neat and orderly condition. It is, perhaps, not too much to say, that the "track department" of this company's service is the best organized and most efficient of any that have come under my notice west of the Mississippi River, and compares favorably with any in the country.

The supply of steel rails for renewals has not been as great as the deterioration of the old iron, and should be increased in the future. The number of miles of steel track laid on the whole 1,204½ miles of road owned, during the year ending June 30, 1880, was 90, making the total steel track to that date 462.4 miles.

At the same date a total of five hundred and seventy-six (576) miles had been ballasted, and since that time a small amount of ballasting has been done.

At Ogden, the yard of this company has been remodeled in connection with the new buildings erected there. Quite a number of "Lorenz" safety switches have been put in.

On no portion of the company's system has the custom been introduced of lighting switches for night trains. I mention this subject, not as being peculiar to this road, but in order to call attention to the special importance of both day and night signals at switches on that portion of the line between Sacramento and Truckee, particularly in the snow-galleries.

There are points where the switch-stands are entirely obscured by the sheds until the observer is within a few feet of them, so that the targets are invisible and useless, even in the day time. At such points efficient distant signals should be introduced, so that in case of misplacement of the switch ample time would be had in which to stop trains.

When it is remembered, that during the season of snow, it is practically night all of the time in the nearly 40 miles of snow-galleries, and the heavy grades and sharp curves are taken into account, the importance of having efficient signals at all switches day and night will, I think, be appreciated. On the whole twelve hundred and four and one-half (1,204½) miles owned, the company had June 30, 1880, 708.8 miles of fencing, an increase during the year of two and one-tenth (2½) miles. I am unable to state what portion of this is on the subsidized line.

The telegraph line is in good condition.

Bridge work, during the year, has been confined to ordinary repairs.

The "section" of girders for small spans should be increased as renewals are made, and truss bridges calculated for heavier loads as they are rebuilt. The almost universal tendency of railway practice is now toward the use of heavier locomotives, and heavier loading of cars in freight service. The economy of such a course having been amply de-



monstrated, this company must eventually adopt this practice, and should therefore design its bridges accordingly. The floor system in general use on this line is very faulty. The ties are sufficiently far apart to allow a wheel to drop between them; there is no efficient provision for the prevention of "bunching" of ties; the ties (except on deck-trusses) are short; nor (except in a few instances) is there a guard of any kind to prevent a de-railed truck from leaving the bridge.

### *Buildings, &c.*

New section-houses have been erected at Milpitas and Stockton; an extensive freight-house at Sacramento; a wood-shed at Bronco, and a combination passenger and freight station and dwelling at Deeth. New tanks have been put up at Golconda, Toano, and Be-o-wa-we, and one is to be built at Peko this fall.

The passenger station at Sacramento—mentioned in my report last year—has been completed, and has been occupied since December 28, 1879.

A cast iron turn-table at Stockton, and a wooden one at Junction, have replaced old structures. At Sacramento shops a rolling mill building was under way at the time of inspection. It is the intention of the company to roll all sizes of iron that are required in the service.

The very heavy snows of last winter caused the destruction of the snow-galleries in quite a number of places. They are being rebuilt on substantially the same plan as the old ones.

The snow fences are in good condition.

The rolling-stock and machinery have been well maintained.

### *Branches, &c.*

#### VISALIA DIVISION.

This division was inspected May 11, 1880. The track, switches, bridges, &c., are of same pattern as those on the main line.

Large renewals of iron are needed, and very little of the line is ballasted. Making allowances for these facts, the line is in very fair condition.

### *Improvement at Oakland.*

The improvement at Oakland is still in progress. When finished "this will consist of a solid embankment or mole constructed on and near the line of the present Oakland wharf, extending a distance of 6,650 feet from the Oakland shore, and of sufficient width for four railroad tracks and a carriage-way for a distance of 5,400 feet, and thence to the end, increasing to a width of 280 feet."\*

#### LEASED LINES.

#### NEW ROUTE VIA NORTHERN RAILWAY AND CALIFORNIA PACIFIC RAILROAD TO SACRAMENTO.

This route was opened to the public December 28, 1879.

The Northern Railway, between Oakland and Port Costa (formerly Carquinez), is in excellent condition.

The ferry-boat Solano, built for the transfer of trains between Port Costa and Benicia, is working very successfully. She is a side-wheel

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\* Extract from Annual Report of Mr. S. S. Montague, Chief Engineer.

double-ender, 424 feet over all; 406 feet on bottom; extreme width over guards, 116 feet; draught, light, 5 feet, and loaded  $6\frac{1}{2}$  feet. Registered tonnage is 354.31 tons. Engines are two in number; they are vertical beam engines, with cylinders 60 inches bore, and 11 feet stroke. "Wheels 30 feet diameter, with 24 buckets each, 17 feet face. Boilers are tubular, 8 in number, each 7 feet diameter of shell, and 28 feet long, with 143 tubes 4 inches diameter and 16 feet long. Total heating surface in all the boilers, 19,640 square feet; grate surface, 288 square feet. Each wheel is driven by an independent engine." There are four balanced rudders at each end of boat,  $11\frac{1}{2}$  feet long by  $5\frac{1}{2}$  feet deep, coupled together and worked by hydraulic steering gear.\* There are four railroad tracks, each running the whole length of the deck, affording "capacity for 48 freight cars, with locomotive, or 24 passenger coaches of the largest class." "The aprons connecting the boat with the slips \* \* \* are each 100 feet long, with four tracks, so arranged that freight and passenger trains are run aboard without being uncoupled from the locomotive. The aprons weigh each 150 tons, and are worked by a combination of pontoons and counter-weights by hydraulic power."

The distance across the straits, from slip to slip, is  $1\frac{23}{100}$  miles, and the transfer of a passenger train, under ordinary circumstances, requires about 13 minutes from the time the train stops on one side of the straits until it leaves the boat on the other. The steering gear is very efficient, the pilot guiding the boat easily with one hand, although the current is sometimes at the rate of 7 miles per hour.

The new portion of the line between Benicia and Suisun has been brought up to a good condition, with the exception of the sinks in the "tule" land. On the California Pacific, between Suisun and Sacramento, a large amount of ballasting has been done, and some steel rail put down.

#### SAN PABLO AND TULARE RAILROAD.

This line has been maintained in good condition, except in some places where it runs over "tule" land.

#### SOUTHERN PACIFIC RAILROAD.

Inspection made May, 1880.

The line leased by the Central Pacific Company extends from Huron, Cal., to the Colorado River at Fort Yuma.

The maximum grade is  $116\frac{18}{100}$  feet per mile, and the sharpest curve is 10 degrees.

Weight of iron rail per lineal yard, 56 pounds; weight of steel rail per lineal yard, 50 pounds.

There is a land grant for the whole length of the main line from Huron to the Colorado River, but a very small proportion of it is of value.

The road and equipment are in very good condition, being maintained on the same plan and under the same general supervision as the owned lines of the Central Pacific Company. On December 31, 1879, there were 340 miles of track laid with steel rails, and a portion of the line ballasted with gravel.

The tunnels are twenty in number, of an aggregate length of 15,247 feet, all lined with timber.

\* Patented by Mr. Jno. Gates, Mechanical Engineer of the Oregon Railway and Navigation Company, Portland, Oregon.

The bridges are nearly all pile and trestle, and are similar in detail to those on the Central Pacific main line.

The station buildings are in good repair.

The water-supply on the Yuma division is deficient, no water having been found between Walters and the Colorado River, a distance of 106 miles, although borings have been made to a great depth, 1,350 feet having been reached in one place.

There are shops sufficient for the present demands of the road at Los Angeles, and engine-houses at Mojave and Sumner.

The branches from Los Angeles to Santa Monica, Wilmington, and Santa Ana, are in good condition. The local business on all of these lines is light.

#### SOUTHERN PACIFIC OF ARIZONA.

This line has received no aid from the United States, and is only mentioned here because it forms a part of the Central Pacific system of roads. The line is in as good condition as can be expected of a road so recently built.

Lying, as it does, in a country almost entirely desert, its business is chiefly with the numerous mining districts, and in supplying the northern provinces of Mexico.

The recent development of mining interests in Arizona has made a profitable business for the railroad, which it is hoped will be permanent, and when connection is made with roads leading east, some through traffic will doubtless be obtained.

#### CENTRAL BRANCH UNION PACIFIC RAILROAD.

This company owns the subsidized line from Atchison to Waterville, Kan., 100 miles, and leases the lines of the Atchison, Colorado and Pacific Railway Company, 261 miles, making a total owned and operated of 361 miles; and the whole is operated as a part of the Missouri Pacific system, the accounts, however, being kept separate.

#### SUBSIDIZED LINE.

Inspection made September, 1880.

On this road the following improvements have been made, or are in progress, viz:

The grade has been cut down near Effingham, and also near Farmington, and embankments widened near Effingham and Netawaka; a new arched culvert of 8-foot span has been put in, in place of a bridge, and the masonry for six girder bridges rebuilt; sixteen miles of track ballasted with stone, and 50,000 ties and 15 miles of iron provided for renewals and repairs for the current season.

New side tracks have been put in at Effingham, Netawaka, and Bigelow.

One pile bridge has been wholly rebuilt, and four partially; four pile openings added; nineteen girder bridges and the approach to bridge No. 101 renewed; one "Howe" truss substituted for a girder bridge; the woodwork of two "Howe" bridges renewed, and one new overhead bridge for wagon road constructed.

At Atchison a new store-house and an office for master mechanic; at Corning a new coal platform and chutes; and at Brighton the foundations for a new station have been built; the station at Farmington painted, and the passenger platforms at several stations renewed.

A union depot, in which this company is interested, has been erected at Atchison, with sufficient capacity to accommodate the passenger business of all the roads centering there.

### SIoux CITY AND PACIFIC RAILROAD.

This company now owns and operates railroad as follows, viz:

<i>Owned.</i>		Miles.
Sioux City, Iowa, to Missouri Valley, Iowa, and Fremont, Nebraska.....		107.42
<i>Leased.</i>		
Fremont, Elkhorn, and Missouri Valley.....		109.99
Total owned and operated.....		<u>217.41</u>

Inspection made in August, 1880, but did not include any leased line. On the line owned, the condition of the track has, on the whole, been improved.

Renewals of ties have been made and some rerolled iron laid.

Repairs and renewals of trestle and pile bridges have been continued, and the only "Howe" truss on the line renewed.

A new frost-proof tank and a windmill have been erected at Sloan, and four new engines and some new freight and stock cars added to the equipment.

The crossing of the Missouri River by ferry still continues to be serious drawback to the operations of the road.

It is probable that at no point on the Missouri, where a railroad transfer has been made, has the river been more troublesome than at this place. Notwithstanding this, and the considerable expense attending it, this company has been able during the year, to improve the condition of its road and increase its rolling stock.

Considering the peculiar situation of this line, and the difficulties encountered in operating it, the management deserve great credit.

### NORTHERN PACIFIC RAILROAD.

Inspection of Pacific and Pend d'Oreille divisions made in May, 1880, and of the eastern divisions in August, 1880.

On June 30, 1880, this company had in operation railroad as follows, viz:

<i>Road owned.</i>		Miles.
One-half interest in road from Duluth to Northern Pacific Junction.....		24.0
Northern Pacific Junction, Minnesota, to Curlew, Dakota Territory.....		484.5
Kalama to Tacoma, Washington Territory.....		105.0
Puyallup Branch, Washington Territory.....		31.6
		<u>645.1</u>
<i>Road leased.</i>		
Joint use of track from Saint Paul to Sauk Rapids, Minnesota.....		75.5
Sauk Rapids to Brainerd, Minnesota.....		60.5
		<u>136.0</u>
Total owned and operated.....		<u>781.1</u>

On the same date the track was finished, on the Missouri division, to a point about 41 miles west of Curlew; and on the Pend d'Oreille division, about 18 miles were laid from Ainsworth east.

On August 16, 1880, the one hundred miles of road from the Missouri River west was accepted by the President of the United States, and has since been put in operation throughout the whole distance. The company also own the Casselton Branch Railroad, now in operation from Casselton, Dakota Territory, to Elm River, 31 miles, and under way for  $11\frac{1}{2}$  miles beyond that point.

#### PEND D'OREILLE DIVISION.

A portion of this division was visited on May 22-24, 1880. At that time the track was laid from Ainsworth east about 18 miles.

At the end of track wagons were taken, and the trip extended to a point about 83 miles from Ainsworth.

With the exception of one heavy cut, the graduation was nearly done to about 75 miles from Ainsworth, while beyond that point work had been commenced. Except at the "Summit" cut, the work is light, with but little rock. For the first 25 miles there is no bridging, and but little beyond.

The work so far as completed has been well done.

The material (rock excepted) is either fine sand or volcanic ash. The embankments composed of these will probably be difficult to maintain when the line is exposed to high winds, and it is quite likely that the track will sink in the volcanic ash banks, unless ballast is put in.

There being no timber in this section, great delay has been experienced in getting cross-ties and lumber, and, in consequence, track-laying has progressed very slowly.

Since the date of inspection the grading has been completed to Spokane Falls, 150 miles from Ainsworth, and the track extended to 25 miles from Ainsworth. Grading has also been done on a line to connect the road at Ainsworth with the Oregon Railway and Navigation Company's line at Wallula, a distance of about 12 miles.

#### PACIFIC DIVISION.

Inspection made May 26, 1880. The Pacific division comprises the line from Kalama, on the Columbia River, to New Tacoma, Washington Territory, on Puget Sound, 105 miles, and a branch to Wilkeson, 31.6 miles.

The business is very light, and requires close management to make earnings meet expenses.

The line after leaving the Columbia River passes up the Cowlitz River for nearly thirty miles, and thence strikes across the country to Puget Sound, crossing on its way Newaukum Creek, and Skookum Chuck, Des Chuttes, and Nisqually Rivers.

The maximum grade is 116 feet per mile, but occurs only for a short distance at Tacoma, the maximum, with this exception, being 52.8 feet per mile.

The sharpest curve is 10 degrees. The location of the line is faulty in some respects, there being quite a number of places between Tenino and Tacoma where sharp curves are reversed with no tangent between them, and some between Kalama and Tenino with but very short tangents.



Quite a number of the embankments are narrow, and a good many of the cuts need ditching.

There is no bridge masonry, nor are there any tunnels, on the line. A good portion, probably more than 50 per cent., is fairly ballasted with gravel. The ties are of pine. Rails are laid with plain double-fish splice, with joint opposite.

From Kalama to Tenino, 66 miles, the track is not in good surface, but it is much better between Tenino and Tacoma.

Throughout nearly the whole distance the track needs lining up and the curves rectifying and adjusting.

There are quite a number of "Howe" truss bridges (some covered), and numerous pile and trestle bridges. Bridge floors are without guards.

There are good station buildings at Kalama and Tenino, and temporary ones at Cowlitz, Olequa, Winlock, Napavine, Centreville, Yelm Prairie, and Lake View. At Tacoma the company have frame shops, warehouse, office, and hotel building, and extensive wharves for shipping coal.

The rolling stock is not in first-class condition. Neither power-brakes nor safety-platforms are used on the passenger equipment.

The Puyallup branch is in very fair condition. Its eastern terminus is now at Wilkeson, where the company have coal mines.

#### MINNESOTA AND DAKOTA DIVISIONS.

Inspection made in August, 1880. These divisions embrace the road from Duluth, Minnesota, to Bismarck, Dakota Territory, a distance of 450 miles. From Duluth to North Pacific Junction, 24 miles, this company has an undivided one-half interest in the road, the Saint Paul and Duluth Company owning the other half. For a report on this portion see Saint Paul and Duluth Railroad, page —.

The line from North Pacific Junction to Fargo is very straight, a large portion of it being tangent, and passes over a gently undulating country.

The maximum grade is 50.2 feet per mile on the Minnesota, and 60.2 feet per mile on the Dakota division; and the sharpest curve is 3 degrees on each. In two places reversions occur with very short tangents between, which are entirely unnecessary in so flat a country.

The grades are adjusted so as to follow the undulations of the ground very closely.

Many of the embankments are narrow, some of them need raising, and many of the cuts require ditching. There are no tunnels. About 140 miles are wholly or partially ballasted with gravel. The ties are nearly all of soft wood; rail is 56 pounds per yard, laid with double, plain, fish-joint.

During the fiscal year ending June 30, 1880, 116,000 ties, mostly oak, and 128 miles of steel were put in the track, and 26,090 feet of new siding laid. "Stub" switches are used, with revolving switch-stands with targets. Most of the frogs used are of the "Mansfield" pattern.

On the Minnesota division the track is in fair line and surface, although some of the curves should be rectified. On a considerable portion of the Dakota division the track is out of line and surface, and large renewals of ties needed.

The appearance of the line would be much improved if old material was thoroughly gathered up and removed, and bushes, &c. cut down near the track.



There is a "Post" combination bridge over the Mississippi River at Brainerd, and there are about fifteen spans of "Howe" truss bridge, and numerous pile and trestle bridges at various points. The truss bridges are all supported on timber piers. During the year ending June 30, 1880, 33 pile bridges were renewed and 88 culverts repaired.

The station buildings are nearly all neatly painted and well maintained wooden structures, and do credit to the company.

The water-service seems to be efficient and the buildings and machinery well maintained. Two frost-proof tanks have been put up during the fiscal year.

At Duluth the company have a brick engine-house, with stalls for 10 locomotives, and during the fiscal year they have extended their facilities at that point by the addition of 700 feet of dock and the construction of 6,006 feet of track supported on piles.

At Brainerd are situated the company's principal shops, consisting of engine-house, with 12 stalls, car-house, machine and smith shops, foundry, and store-house, and office; all of them frame. The shops are furnished with good machinery, but appear to be too small for the present wants of the road, and there is a conspicuous lack of order and neatness about them. There are also at Brainerd, belonging to the company, a very large and convenient office building, a hotel, a freight-house, and a "colonists' reception house," all of them frame, besides the necessary smaller buildings incident to a division point.

At Fargo there have been built during the fiscal year a brick engine-house with stalls for 12 locomotives, a brick shop 85 feet by 40 feet, and a brick freight-house 150 feet by 40 feet; all of them with slate roofs.

At Bismarck there is a frame engine-house with 6 stalls, and frame passenger and freight houses. The line is supplied with good-sized and well-maintained two-story section houses and plain board tool-houses.

During the last winter great trouble was had on account of snow blockades.

The snow-fences are generally in single ranks, and are composed of posts set in the ground, with rails and upright batten.

That blockades should occur with the limited provision for their prevention is not surprising. To avoid trouble in the future it may be necessary, in some cases, to either raise the road-bed up out of shallow cuts or to grade the sides of such cuts down to a very flat slope, as may be found most desirable. Buildings should be so located, and materials piled, as to throw the drifts occasioned by them away from the track; snow-fences placed in double, triple, or quadruple ranks, as may be found necessary, and constructed on the plan now in general use on other roads, so as to be easily moved when circumstances require it, or raised up when filled with snow. In long and deep cuts snow-sheds may be necessary. These, in conjunction with an efficient equipment of snow-plows and track-flangers, should enable the company to operate the line in winter without serious delay.

The rolling stock is in good condition. The passenger equipment is supplied with "Miller" platforms and "Westinghouse" automatic brakes.

The equipment has been increased during the fiscal year by the addition of 9 locomotives, 8 caboose-cars, 1 pile-driver, 200 box and flat cars, 1 observation-car, 37 hand-cars, 4 baggage-cars, 5 snow-plows, 30 push-cars, 15 boarding-cars, 3 snow-flangers.

#### MISSOURI DIVISION.

The crossing of the Missouri River is effected by means of a transfer-boat capable of carrying 6 freight-cars at one time.

The same difficulties, arising from the unstable character of the river, that have been encountered at other transfers on the Missouri, have been experienced here.

Plans and estimates have been prepared for a high-level bridge at this point, consisting of 3 spans of 400 feet each, and 2 of 100 feet each, with the necessary earthwork approaches, and a dike above the bridge to narrow the river (which is here about 2,700 feet wide) to a width of 1,200 feet, the cost of which, it is estimated, will be about \$800,000, using masonry piers, abutments, and wrought-iron superstructure.

The 100 miles extending from the Missouri River westward, recently accepted by the President of the United States, is in very fair condition for a road newly opened through an almost uninhabited country.

On this piece of road the maximum grade is 51.06 feet per mile; the sharpest curve 5 degrees, and 76 per cent. of the distance is tangent.

The line is laid with 56-pound iron, with plain, double fish-joints, on ties chiefly of soft wood, and with no ballast.

The switches are of the same pattern as on other portions of the road.

The sidings aggregate 22,950 feet, not including 17,800 feet of track at the lower "transfer," on the west bank on the Missouri River.

There are 6 spans of combination "Pratt" truss of an aggregate length of 990 feet, supported on cut-work piers filled with stone.

These bridges are built of apparently good material and workmanship, but the factor of safety is not as large as it should be.

The pile bridges are one hundred and forty-two in number, and generally well built. Nearly all of the bridge floors are furnished with timber-guards, and where temporary floors still remain they are being replaced with new ones.

There are at Mandan a frame engine-house with 4 stalls; a coal-shed; a passenger and freight station combined; a superintendent's office, and a dwelling for superintendent; besides stable, store, tool, and tank houses, and temporary carpenter's shop; all of them frame.

There are 4 frost-proof tanks at other points, and 4 standard section-houses.

#### LEASED LINES, ETC.

The line from Brainerd to Sauk Rapids, Minnesota, leased from the Western Railroad Company, of Minnesota, is a road maintained in good line and surface, with well-shaped road-bed without ballast.

Bridges are "Howe" truss and pile, and, as the road has been operated but about three years, are nearly new.

The station buildings are in good condition.

Water-tanks are of the frost-proof pattern.

The line from Sauk Rapids to Saint Paul, used jointly with the Saint Paul, Minneapolis and Manitoba Railway Company, is also in commendable condition for a road maintained without ballast, the neatness and order in connection with everything visible along the line being especially noticeable.

#### *Improvements at Saint Paul.*

At Saint Paul the filling up of the ground acquired for terminal purposes is in progress, and a freight-house 400 feet by 40 feet has been erected.

The construction of a building to be used for the general operating offices of the company has also been commenced.

#### *Lands.*

The following remarks on the lands of the company are submitted here, not as a report on all of the territory embraced in the grant to the

company, but as notes on the portions passed through on the several trips of the present season.

From the commencement of the company's grant at the western edge of the grant to the Saint Paul and Duluth Railroad Company to about 40 miles west of Brainerd the country is a succession of swamps and low uplands, interspersed with numerous lakes. The swamps are mostly covered with a growth of tamarack, cedar, and spruce, while on the uplands are found white pine, oak, some elm, and various other kinds of wood usual in a forest in the northern United States.

From about 40 miles west of Brainerd to about 35 miles east of Fargo the country is prairie, with numerous lakes, patches of swamp, and occasional timber, and much of it good for agricultural purposes. From this latter point westward to the Missouri River stretches the great wheat region, embracing the celebrated valley of the Red River of the North.

This country is rapidly filling up with settlers, apparently of a good class, the neat, well-painted farm buildings so noticeable in this region, bearing witness thereto.

West of the Missouri River, on the portion of road recently accepted by the government and opened for use, the country is as yet almost uninhabited, and but little of the land surveyed. This region is all open "plain" country, somewhat more broken and undulating than that between the Red and Missouri Rivers, but the greater portion of it is apparently good wheat land, and will, doubtless, produce good crops, though not, perhaps, so large as in the Red River Valley. Extensive beds of lignite are found on this portion of the road, and extend much farther west, furnishing a fuel available for all domestic purposes. The company are now using this fuel in their locomotives, mixed in equal quantities with other coal.

It is probable that with a modified form of fire-box, similar to that now being introduced on some eastern roads, this fuel can be used without admixture with any other. Lignite of no better quality than this was burned successfully in the American engine with "Wooten's" fire-box, which was sent to the late Paris exposition, during some trials on the Italian railroads.

I am informed that steps have been taken to test this fuel in a similar manner.

On the Pacific division the line from Kalama to Tacoma passes through a well-watered, timbered country, with occasional open prairies. These prairies do not appear to be very rich, but there are, doubtless, lands in the river bottoms good for farming purposes.

The magnificent timber embraced in the company's grant on this coast must become valuable as soon as communication is opened with the treeless district east of the mountains. At present, as shipments are chiefly made by sea, only those lands bordering on the sound are available.

The large beds of cretaceous coal lying within the grant must also prove valuable. During the late inspection, the mines at Wilkeson were visited. Owing to an improper system of mining these mines have not hitherto been successful. The coal lies in large veins, with a dip of about 65 degrees, with the ravine through which the stream runs cutting across the strata, so that every natural facility is afforded for economical working. Some of the veins are said to produce good smith coal, while the coke made from coal mined here (specimens of which were brought away) appears to be of excellent quality.

On the Pend d'Oreille division, after leaving Ainsworth, the line

passes through about twenty-four miles of open, sandy country, and then enters a treeless, rolling region, with soil of volcanic ash, and covered with a growth of "bunch grass." This continues as far as my journey reached—is said to extend to Spokane Falls—and constitutes a portion of the great wheat country of Eastern Washington Territory.

It must not be supposed that the entire country within the limits of the grant on this division are of this character. The western limits embrace a portion of territory bordering on the Columbia, covered with drifting sands from the river; but it is probable that 60 per cent. of the grant on this division is available for cultivation.

The extreme southern edge of the grant in Montana was also reached during the last inspection trip made.

Here there are good grazing lands, and it is said, that farther down in the valleys there are lands suitable for cultivation.

#### OREGON AND CALIFORNIA RAILROAD.

Inspection made in May, 1880. This road extends from East Portland to Roseburg, Oregon, a distance of 197.36 miles. It obtained a grant of lands by act of Congress approved July 25, 1866. This grant in Oregon was made for the purpose of aiding the construction of a railroad and telegraph line from Portland to the south line of the State, there to connect with a line—aided by a similar grant in California—from the Central Pacific Railroad to the Oregon line.

The road in Oregon has been built to Roseburg, and the road in California to Redding, in that State, leaving a gap between the termini of about 240 miles, measured in a straight line.

The crop of last year in the Willamette Valley having been a failure, the earnings of the road have fallen off largely, and its previously embarrassed financial condition aggravated.

The maximum grades are 103 feet per mile going northward, and 93 feet per mile going southward. The extreme grades only hold for about  $\frac{1}{10}$  of a mile each, the maximum grade, other than these, being less than 90 feet per mile in either direction. The sharpest curve is 10 degrees, and 77 per cent. of the line is tangent.

On June 30, 1880, there were, according to the company's report, 8 miles of track laid with steel rail weighing 56 pounds per yard. No renewals of main track were made or new sidings laid during the year ending on that date.

A portion of the road is partially ballasted with gravel.

The iron is laid with plain double fish-joints, and the steel with double fish-joints composed of one plain and one angle fish bar. Rails are laid "hap-hazard" on soft-wood ties. The line and surface of track are inferior—much of the iron worn, and many joints loose.

The switches are "stub," with upright stands with targets, and rail frogs. There are 23 spans of "Howe" truss bridge of an aggregate length of 3,753 feet, supported in most cases on trestle or crib piers, and 64,236 linear feet of pile and trestle bridging. No renewals are reported as having been made during the year.

Bridge floors are provided with guards.

There is a new two-story frame passenger station and eating-house at Albany. At other points the buildings are generally either old or temporary.

The shops near East Portland are temporary structures, and consist of machine-shop, car-shop, and engine-house. The company have 8 water stations, 15 section-houses, and 25 tool-houses.

The rolling stock is maintained in very good condition. Neither safety platforms nor train brakes are used.

The company also own and operate a steam ferry across the Willamette River at Portland to connect its station in East Portland with the main city.

#### OREGON CENTRAL RAILROAD.

Inspection made June, 1880.

This line extends from the city of Portland to Saint Joseph, Oregon.

It obtained a grant of lands under the act of Congress approved May 4, 1870; was examined by commissioners and accepted by the President of the United States, as provided in the act named, but no lands were ever patented to it. During the past year the road has not paid operating expenses.

The maximum grade going southward occurs in the city of Portland, and is 198 feet per mile. Going northward, it is 80 feet per mile; and the sharpest curve is 12 degrees. The line is laid with iron, 50 and 56 pounds per yard, on soft-wood ties.

There are 140 lineal feet of "Howe" truss, 60 lineal feet of "Queen post" truss, and 13,404 lineal feet of pile and trestle bridge on the line.

The buildings are temporary frame structures.

The road is in very bad condition. It is a difficult road to maintain, even with sufficient means, owing to the wet, clayey nature of its cuttings, the want of suitable ballast, and the large amount of bridging.

A railroad has been built from the southern terminus of the Oregon Central to Corvallis (and is to be extended to Junction) by the Western Oregon Railroad Company, and the Oregon Central is now operated under lease by this company. This road was passed over on the same date on which the inspection of the Oregon Central was made.

It is laid with steel, 50 pounds per yard, with fish-joint of one plain and one angle bar, on soft ties.

The maximum grade is  $63\frac{1}{8}$  feet per mile, and the sharpest curve 4 degrees. It was in an unfinished condition at the time of inspection, out of line and surface, with wet, muddy cuts, and without ballast. It has not, thus far, paid running expenses.

#### SAINT LOUIS AND SAN FRANCISCO RAILWAY.

Inspection made in April, 1880, of the main line from Pacific, Mo., to Vinita, Indian Territory.

This company, at the present time, operates the following-named lines of road, viz :

<i>Owned.</i>		Miles.
Pacific, Mo., to line of Indian Territory.....		293
<i>Leased.</i>		
Atlantic and Pacific, in Indian Territory.....		34
Saint Louis, Wichita, and Western—Pierce City, Mo., to Oswego, Kans., and branch to Joplin, Mo.....		83
Missouri and Western—Oswego, Kans., to Wichita, Kans.....		144
Joplin Railroad—Joplin, Mo., to Girard, Kans.....		38
Joint use of track—Saint Louis to Pacific, Mo.....		37
		<hr/> 336
Total.....		629



The line, after leaving Pacific, passes through a good farming region for a few miles. It then strikes and commences to ascend the Ozark range of hills, and passes through a rough, wild country, covered with scrub oak, but interspersed, here and there, with good farm lands.

At about Marshfield, 178 miles from Pacific, it enters the rich farming region of Southwestern Missouri, which continues to the west line of the State.

The through traffic of the road comes from Texas, via the Missouri, Kansas and Texas Railway; and it also derives considerable business from its Kansas lines, and from the Joplin lead region.

Its local trade is composed largely of iron ore, which is shipped to Saint Louis.

The company has made no report to this office of the characteristics of its line, but the maximum grade is understood to be 105 feet per mile, and the sharpest curve ten degrees.

Many of the embankments are narrow.

Between Pacific and Pierce City about fifty per cent. of the line is ballasted with broken stone and gravel, and a portion of the remaining fifty per cent. back filled with stone.

Renewals are made with steel rails, with which there were about 130 miles of track laid at the time of inspection.

The steel is 56 pounds per yard, laid on oak ties, with plain double-fish joint, with "Verona" nut locks, and joints opposite and supported.

Where steel has been laid, the track is in fair line and surface, and the same may also be said as to the ballasted portion generally, although some curves, and even tangents, need lining up. The roadway would be much improved if the *débris* were removed from the ditches in the cuts. The practice in this respect seems to be to only clean the ditches when the *débris* reaches the top of the rail.

The switches are "split-rail" with springs, and "stub," with upright stands with targets.

No provision is made for lighting switches at night.

The bridges are "Howe," and Post combination, truss; a few trussed girders and pile.

There is one new iron bridge, near Lebanon. A considerable amount of work has recently been done renewing and repairing bridges. The floors are provided with guard rails. The new masonry is of good quality, laid in mortar. That under the trussed girders is generally good dry masonry, although in a few places it needs rebuilding.

The station buildings are as good as is necessary for the class of business offered.

There are frame engine-houses at Pacific and Dixon, each with 9 stalls and wooden turn-table, and one at Pierce City, with 3 stalls.

The principal shops of the company are at Springfield, and consist of machine-shop, engine-house with 12 stalls, smith-shop, car and paint shops, brass foundry, and oil house, all of brick, and a frame car-house. The passenger and freight houses at this point are also of brick. The shops appear to be too small for the wants of the road.

Along the line of the road old material is generally well gathered up, but at stations and at the shop-yard there is a want of order and neatness.

The water supply is obtained from surface ponds in most cases, and can be enlarged as the wants of the service demand.

Of the 29 water stations, twenty-one have tanks of the frost-proof pattern; at fourteen of them the pumping is done with steam, and at ten horse-power is used.



The rolling stock appears to be in good condition. It was increased during 1879 by the addition of 11 locomotives and 370 cars of all classes.

"Westinghouse" air-brakes and "Miller" platforms are used on the passenger equipment.

### MISSOURI, KANSAS AND TEXAS RAILWAY.

Inspection made of land grant portion only, in April, 1880.

The land grant portion of this road extends from Junction City, Kans., to the north line of the Indian Territory, a distance of  $183\frac{2}{3}$  miles.

From Junction City to Parsons, 156 miles, the road forms the Neosho division, the remaining distance from Parsons to the line of the Indian Territory forming a part of the main line.

The Neosho division, running as it does, in a direction from a little west of north to south of east, is cut off from through traffic, and obtains only the local trade of the country through which it passes.

It is probable that it would never have been built but for the valuable grant of lands lying in the fertile valley of the Neosho.

On the whole land-grant road the maximum grade is 61.2 feet per mile, the sharpest curve 5 degrees, and 84 per cent. of the line tangent. The road is laid with 45 and 56 pound iron, and 52-pound steel,  $18\frac{1}{2}$  miles of the latter material having been laid between Parsons and the Indian Territory line.

The steel is laid with fish-joint composed of one plain and one angle bar, while the iron is nearly all laid with old style of chair joints.

The ties are cedar and oak.

At points, here and there, difficult to maintain, stone ballast has been put in, amounting in all to about 7 miles. Elsewhere, the road is kept up with the native soil.

As a whole, although needing some renewals of iron and ties, the roadway is in commendable condition, considering the light business done, the large percentage of chair iron, and the nature of the soil; and shows evidence of intelligent supervision. Much of the road-bed is well shaped and neatly maintained with ditches well cleaned.

The switches are "stub," with upright stands with targets, and rail and "Mansfield" frogs.

The side-tracks aggregate  $9\frac{1}{2}$  miles.

The bridging is as follows, viz:

	Feet.
Ordinary "Howe" truss .....	401
"Combination" trusses .....	5,098
Girders on masonry .....	2,695
Pile and trestle .....	2,288
Total .....	10,482

The bridges are in general good repair, with well-laid floors and guard-rails. Most of the bridge masonry is good, all that has been rebuilt being "first-class" laid in mortar. On a portion of the road the masonry under girder bridges needs renewing.

The station buildings are nearly all cheap wooden structures, but are doubtless sufficient for the business offered.

At Parsons, the passenger station is a two-story brick building, the upper portion being used for offices.

The shops at Parsons consist of a stone engine-house with 14 stalls, built with iron roof trusses, slate roof, stone engine-pits paved, and cast-iron turn-table; a stone machine-shop with iron trusses and slate roof; and a frame smith-shop with 10 forges; all in good repair. There

are 13 water stations, at the majority of which, the tanks and wind-mills are new.

The rolling-stock forms a part of the general equipment of the road, and being so small in quantity, no opinion could be formed as to the general condition of this portion of the company's property. "Miller" platforms and "Westinghouse" air-brakes are used.

### ATCHISON, TOPEKA AND SANTA FÉ RAILROAD.

Inspection made in April, 1880.

This line extends from Atchison, Kans., to the west line of the State, 470.58 miles, and received a grant of lands for that distance under the act of Congress approved March 3, 1863, granting lands to the State of Kansas for the purpose of aiding "the construction of certain railroads and telegraphs in said State."

It is regretted that the report on this road cannot be made more complete; but, contrary to general custom, the courtesy of detailing an executive officer familiar with the property to accompany the inspection, and give such information as might be desired, was not observed by this company; nor was the train furnished for the inspection provided with either conductor, brakeman, drinking-water, or fire.

On June 30, 1880, the lines owned and operated were as follows, viz:

	Miles.
Owned.....	470.58
Operated, but not owned.....	843.42
Total.....	1,314.00

Since that date extensions have been made to the operated lines in New Mexico.

The following report is on the land-grant portion only:

The maximum grade going east is 62 feet per mile, and going west 63.7 feet per mile.

The sharpest curve is 6 degrees, and 86 per cent. of the line is tangent.

On about 33 per cent. of the line the embankments are narrow.

The masonry under bridges is generally good, especially that recently built, which is first-class.

There are pieces of track, here and there, ballasted with broken stone, aggregating, at a rough estimate, about 30 miles. In addition to this there is some track back-filled with stone.

The ties are not laid as closely together as is desirable with the weight of rail used. Notwithstanding the large renewals of ties that have been made, a great many new ties are still needed. The rails are iron, 56 pounds, and steel, 52 and 56 pounds, per yard.

The steel is laid with double angle-bar fish splices, with suspended opposite joints.

During the year 1879, 70 miles of track were renewed with steel, being 15 per cent. of the whole line, notwithstanding which there remains a good deal of track needing immediate renewal.

Between Atchison and Topeka the track is not well kept up, line and surface being inferior and ditches not cleaned. Between Topeka and the State line it is much better, quite a large portion of the road-bed being well shaped and much of the track in fair line and surface.

A want of care is shown in neglecting to keep joints well screwed up, and in throwing the debris from the ditches up on the slope where it will soon wash down again.

The switches are chiefly "stub" with upright switch-stand with targets.

The total length of side-track December 31, 1879, was 64.6 miles.

The bridges are of various styles, including "Howe," combination, and "Pratt" trusses, bow-string girder, plain girder, pile, and trestle.

At the Kaw River, two spans of wrought iron "Pratt" truss have been recently put up on first-class masonry piers. There still remain at this bridge one span combination, and one of "Howe" truss with a trestle approach.

All of the newer bridge floors are laid with good oak floor-timbers, and have timber guard-rails.

The buildings are in average good condition.

There is a stone freight-house at Atchison, and a new stone passenger station at Topeka.

The shops at Topeka are of stone and brick, and consist of engine-house, with stalls for 16 locomotives, machine, smith, and car shops, etc.

There are also stone engine houses at Emporia and Nickerson, with stalls for 16 and 13 locomotives respectively.

There are 34 water stations on the line, at 6 of which there are frost-proof tanks. The water supply is apparently ample, although trouble is experienced in common with other roads in the western country on account of alkali in the water.

The rolling stock is kept in good condition. The passenger stock is equipped with "Westinghouse" automatic brakes and "Miller" platforms, and all coaches, engine trucks, and tenders, are being provided with paper wheels with steel tires, those under coaches being 42 inches in diameter.

#### SAINT PAUL AND DULUTH RAILROAD.

Inspection made in August, 1880.

The road owned and operated June 30, 1880, was as follows, viz:

Owned.	Miles.
Saint Paul and Duluth.....	156
Knife Falls Branch.....	6
	<hr/>
	162
Leased.	
Stillwater and Saint Paul.....	13
	<hr/>
Total.....	175

During the present season a branch has been constructed from Wyoming to Centre City, a distance of 11 miles.

The 24 miles from North Pacific Junction to Duluth is owned jointly with the Northern Pacific Railroad Company. The road for the greater portion of its length passes through a swampy and timbered country, interspersed with occasional stretches of farm lands.

No report of alignment and grades has been made to this office, but it is understood that the maximum grade occurs at Saint Paul, and is somewhat over 100 feet per mile. There is also a grade of 76 feet per mile occurring between Duluth and North Pacific Junction. The location is bad in detail, sharp reversions and "broken-back" curves occasionally occurring.

Between North Pacific Junction and Duluth the embankments are

narrow. The cuts on this portion of the road slide in badly and the ditches require attention.

Perhaps 15 per cent. of the whole line is more or less thoroughly ballasted with gravel. The ties are of oak and soft woods, chiefly the latter. The track between Duluth and North Pacific Junction has been partially and the Saint Paul hill wholly laid with steel. A portion of the track is in fair condition, but on much of it the joints are down, splices loose, and track out of line, showing a want of proper supervision. The switches are "stub," with revolving upright stands with targets.

The bridges appear to be generally in good repair. Between Duluth and North Pacific Junction 3 of the 5 high trestles have been rebuilt with stone foundations, and the other 2 will be finished before the close of the present season. All new bridges have floors provided with guard rails.

No special examination was made of buildings. They appear to be in ordinary good repair, and adapted to the wants of the road.

The water supply is ample.

The equipment appears to be in average condition. A portion of it belongs to the Northwestern Equipment Trust.

The passenger stock is equipped with "Westinghouse" automatic brakes and "Miller" platforms.

#### OTHER ROADS.

Of the roads coming under the provisions of the act of June 19, 1878, mentioned previously as having been passed over but not inspected, I can only say that on all of them there are evidences of permanent improvement.

#### CONCLUSION.

As business increases and resources are greater, lines of road must necessarily be made more permanent, and efficient appliances for the safe and speedy transaction of business introduced into all branches of the service.

Speaking generally, much remains to be done; in changes of line and grades to avoid errors of original location, thereby increasing the commercial value of the road; in the substitution of permanent for temporary structures; in the more thorough construction of bridges; in the introduction of safety switches and efficient signals; in a more thorough and scientific maintenance; in an increase of paying load in proportion to dead weight; in a more economical adaptation of motive power; and, in many cases, in the attainment of a better discipline.

I desire to acknowledge the courtesy that has been shown by the officers of all the roads (except one) which it has been my duty to examine.

Respectfully,

A. B. NICHOLS,  
*Railroad Engineer.*

Hon. THEOS. FRENCH,  
*Auditor of Railroad Accounts, Department of the Interior.*

## REPORT OF THE UNITED STATES GEOLOGICAL SURVEY.

UNITED STATES GEOLOGICAL SURVEY,  
OFFICE OF THE DIRECTOR,  
November 1, 1880.

Hon. CARL SCHURZ,  
*Secretary of the Interior, Washington, D. C. :*

SIR: I have the honor to present herewith the first annual report of the United States Geological Survey, covering the fiscal year ending June 30, 1880.

Congress having prescribed the mode of publishing the results of the survey, it is intended to confine these pages to a simple statement of the bureau organization, progress of field investigation, and results already attained.

The law creating the office of Director of the Geological Survey was enacted and approved March 3, 1879. On March 21, 1879, the President nominated me first Director of the Geological Survey, the Senate confirmed his action on April 3, 1879, and on May 24 I took the prescribed oath of office, and entered on my duties.

Congress expressed its determination to inaugurate the Geological Survey in a provision of law so brief, that I give it entire, in order to comprise in this report the history of the origin and organization of this bureau.

“GEOLOGICAL SURVEY.

“For the salary of the Director of the Geological Survey, which office is hereby established under the Interior Department, who shall be appointed by the President, by and with the advice and consent of the Senate, six thousand dollars: *Provided*, That this officer shall have the direction of the Geological Survey, and the classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain. And that the Director and members of the Geological Survey shall have no personal or private interests in the lands or mineral wealth of the region under survey, and shall execute no surveys or examinations for private parties or corporations; and the Geological and Geographical Survey of the Territories, and the Geographical and Geological Survey of the Rocky Mountain Region, under the Department of the Interior, and the Geographical Surveys west of the one hundredth meridian, under the War Department, are hereby discontinued, to take effect on the thirtieth day of June, eighteen hundred and seventy-nine. And all collections of rocks, minerals, soils, fossils, and objects of natural history, archæology, and ethnology, made by the Coast and Interior Survey, the Geological Survey, or by any other parties for the Government of the United States, when no longer needed for investigations in progress, shall be deposited in the National Museum.

“For the expenses of the Geological Survey, and the classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain, to be expended under the direction of the Secretary of the Interior, one hundred thousand dollars.” Enacted and approved March 3, 1879.

• Prior to the above enactment, and at irregular intervals since the early years of this century, the national government had made various attempts to acquire and diffuse information on the geological structure and min-



eral resources of the United States. Geologists were dispatched to report upon certain fields of mineral industry, and to nearly every military exploration or international boundary survey was attached some one more or less competent to delineate and describe the geological features of the land traversed. Instances of success in this line of expeditionary geological reconnaissance may be found in the reports of the Pacific Railroad and Colorado River surveys, executed under the Corps of Engineers of the Army, and those of the Mexican boundary surveys; while in the department of economical geology, Forster and Whitney's Lake Superior report stands almost alone.

Up to 1867, geology was made to act as a sort of camp-follower to expeditions whose main object was topographical reconnaissance. Charged with definite objects and missions, the leaders of these corps have tolerated geology rather as a hinderance than a benefit. In consequence, such subsidiary geological work amounts to little more than a slight sketch of the character and distribution of formations, valuable chiefly as indicating the field for future inquiry.

In the year 1867, however, Congress ordered the geological exploration of the fortieth parallel, a labor designed to render geological maps of the country about to be opened up by the Union and Central Pacific Railroads, then in process of construction. In this work, geology was the sole object. For the first time a government geologist found himself in independent command, able to direct the movements and guide the researches of a corps of competent professional assistants. At the same session of Congress, Dr. Hayden's "Geological and Geographical Survey of the Territories" was ordered, and a little later Maj. J. W. Powell's "Geological and Geographical Survey of the Rocky Mountain Region" was likewise placed in the field.

Eighteen hundred and sixty-seven, therefore, marks, in the history of national geological work, a turning point, when the science ceased to be dragged in the dust of rapid exploration and took a commanding position in the professional work of the country.

Congress, even then, hardly more than placed the Federal work on a par with that prosecuted by several of the wealthier States. During the years when the Federal geologists were following the hurried and often painful marches of the Western explorers, many States inaugurated and brought to successful issue State surveys whose results are of dignity and value.

Since 1867 the government work has been equal to the best State work, and in some important branches has taken the lead. The wisdom of the legislation which placed in the field those well-organized, well-equipped, and ably-manned corps is apparent in the improved and enlarged results obtained.

But there remained one more step necessary to give the highest efficiency and most harmonious balance to the national geological work. It was the discontinuance of the several geological surveys under personal leadership, and the foundation of a permanent bureau charged with the investigation and elucidation of the geological structure and mineral resources and productions of the United States.

The legislation above cited, and upon which the existence of this bureau is based, leaves some room for doubt as to the precise intention of Congress, both regarding the functions of the organization and its field. Two special and distinct branches of duty are imposed upon the Director of the Geological Survey: 1. The classification of the public land; and, 2. The examination of the geological structure and mineral resources.

As regards the classification of public lands, the text of the law leaves



an uncertainty whether this classification is intended to be a scientific exposition of the kinds of lands embraced in the national domain, such as arable, irrigable, timber, desert, mineral, coal, iron, showing the practical values and adaptabilities of the various classes or kinds of soil and surface, or whether, on the other hand, it was intended to furnish a basis of classification, upon which the government should part title to portions of the public domain.

At present the General Land Office possesses the machinery for the survey, classification, and sale of the public lands. In that bureau the field-notes and maps of the various deputy surveyors are intended to convey sufficiently accurate information for the general guidance of the officers who execute the sales. The law also provides a method of proof as to the character of lands, which forms an indispensable stage in the process of sale. Any transaction as to a piece of public lands may be challenged before the proper officers, and its character may be determined by competent proof. The present method of sale of the public lands depends, therefore, chiefly upon a rule of law rather than the classification of experts in advance of the procedure of sale.

Upon examination of the existing land system, I have assumed that Congress, in directing me to make a classification of the public lands, could not have intended to supersede the machinery of the Land Office, and substitute a classification to be executed by another bureau of government, without having distinctly provided for the necessary changes within the Land Office, and adjustment of relations between the two bureaus.

The Public Lands Commission, created by Congress in the same law which organized the Geological Survey, carefully examined into the question of classification and disposition of the public lands. In the deliberate opinion of that body, it has been adjudged impracticable for the Geological Survey, or any other branch of the Interior Department, to execute a classification in advance of sale, without seriously impeding the rapid settlement of the unoccupied lands.

I have therefore concluded that the intention of Congress was to begin a rigid scientific classification of the lands of the national domain, not for purposes of aiding the machinery of the General Land Office, by furnishing a basis of sale, but for the general information of the people of the country, and to produce a series of land maps which should show all those features upon which intelligent agriculturists, miners, engineers, and timbermen might hereafter base their operations, and which would obviously be of the highest value for all students of the political economy and resources of the United States. Studies of this sort, entirely aside from the administration of the Land Office, can be made of the highest practical value; and to this end a careful beginning has been made.

A second ambiguity in the language of the law which I am called upon to execute, will be found in the use of the term "national domain." All operations of this bureau are, by the language of the law, intended to cover the "national domain."

That term was supposed by the first framers of the law to cover the entire United States. On the other hand, it might be held to mean simply the region of the public lands. It was of the utmost importance, before beginning to plan for any field operations, to know whether "national domain" meant the lands owned by the nation, or the area within its outer boundaries.

With the small appropriation given to begin the vast work of this bureau, I considered it best to confine the operations to the region of the

public land, concerning which field there could be no question as to my legal authority. In the case, therefore, of the uncertainties arising from the language of the law, I have chosen to take the conservative side, and have neither invaded the functions of the General Land Office, nor placed my field parties outside the area of the public lands.

Former national geological surveys have been conducted by means of annual campaigns in the far West. The corps, when driven from the field by the snows of late autumn, have returned to Washington, there to await the accidents of appropriation; and, if provided for by Congress, to take the field at the close of Congressional sessions.

By this means a large amount of valuable time has been lost in breaking up the Western camps and removing the corps to Washington and again returning to the field the following year. Moreover, a very large item of transportation cost has been annually incurred.

#### GEOGRAPHICAL FIELD DIVISIONS.

I have entirely abandoned that plan, and have divided the region west of the 101st meridian into four geological districts. It will be seen by the map accompanying this report that these districts do not always coincide with political lines. On the contrary, they are outlined to embrace certain definite geological fields.

In passing westward the first division is that of the Rocky Mountains, which starts from the Mexican boundary on the Rio Grande, near its intersection with the 107th meridian. From that point the line follows the Texan boundary east to the 103d meridian, which it traces northward to the parallel of 37, and thence making a short jog eastward of a degree and a half of longitude, coincides with the eastern boundary of Colorado to the 41st parallel, and then continues along the meridian of the 102d to latitude 45. From that point a due west line is drawn to the 104th meridian, thence north along that line to the British boundary. The northern boundary of the district coincides with the British boundary to the meridian 116. From that point it follows the boundary line between Idaho and Montana southeasterly to its junction with the 111th meridian, and from that point south to the 41st parallel, thence east to the 109th meridian, and thence south to the Mexican boundary.

Embraced within these boundaries lie Colorado, New Mexico, Wyoming, and Montana, and a small part of Dakota; an area inclosing the whole great chain of the Rocky Mountains, whose geographical function is the dividing of the watershed of the Atlantic from that of the Pacific. This chain is made up of a great number of ranges and groups of mountains separated from each other by deep depressions, in which are either passes or inclosed lowlands known as parks. From the Mexican to the British boundary, the system is a geological unit, and should be studied as one, without reference to political lines.

One division of the survey corps, trained in any one part of this system, would have an immense advantage in deciphering the geological history of any other part. The same system of coal fields, the same types of economical mineral deposits—gold, silver, and iron ore-bodies—extend from one end to the other of this vast mountain district. In charge of this field I have placed Mr. S. F. Emmons, geologist-in charge, whose main office is fixed at Denver, Colo.

The Division of the Colorado embraces a remarkable plateau and cañon country unparalleled elsewhere in the world, which lies between the Rocky Mountains and the Great Basin. It is, in the main, a country drained by the great cañons of the Colorado River, and consists of elevated

plateaus, above which arise isolated groups of mountains, and through which is traced a wonderful labyrinth of cañons from three to six thousand feet in depth.

This division has been for twelve or thirteen years the field of exploration of Maj. J. W. Powell, who has expended here over \$300,000 in explorations and surveys, which are of the highest scientific value, and of which only the beginning has been published. His extensive work is inherited by the present bureau, and the Division of the Colorado is intended only as a temporary one until this work, already far advanced, can be brought to completion. The main portion of the division is most easily reached from Salt Lake City, and the headquarters of the division has been placed there in charge of Capt. C. E. Dutton, United States Ordnance Corps, geologist-in-charge.

The Division of the Great Basin is also a characteristic tract of country, differing essentially from the Rocky Mountains and the Colorado Plateau, which bound it on the east, and the country of the Sierra Nevada, Cascade, and Pacific coast ranges, which lie between it and the ocean on the west. It is for the most part a series of desert plains, interrupted by more or less parallel mountain chains. The chief peculiarity of three-quarters of the area is that its drainage never reaches the sea. Its geological characteristics, equally with its geographical ones, separate it from the surrounding country. It is a region to be studied by itself, and is of the highest importance from its abundant silver districts. Mr. G. K. Gilbert, geologist-in-charge, has been assigned to the direction of this division, with headquarters placed, for convenience of access, at Salt Lake; and it is designed that one office and one field laboratory will meet the requirements of this and the Colorado Division.

The Division of the Pacific embraces the whole of Washington Territory, that part of Oregon which lies west of the Blue Mountains, and all of California, except the desert region lying east of the Sierra Nevada and south of the thirty-eighth parallel, which, from its geological and physical characteristics, belongs, not to the series of Pacific coast mountains, but to the arid region of the Great Basin. The headquarters of the Pacific Division is placed at San Francisco; Mr. Arnold Hague, geologist-in-charge.

As soon as the work upon the cañons and plateaus of the Colorado is done it is intended to discontinue that division and to divide it on the line of the Colorado River between the Divisions of the Rocky Mountains and that of the Great Basin. Thus, after the space of four or five years, there will remain but three divisions west of the 102d meridian. The location and boundary of these divisions are clearly shown upon the map accompanying this report.

The Appropriation Committee of the House of Representatives were informed by me of the uncertainties as to the meaning of the term "national domain"; and they immediately caused to be offered House Resolution No. 116, extending the field of the geological survey over the whole United States. That resolution was promptly passed in the House, but is still pending in the Senate; but, in advance of the action of the Senate, I have laid down on the accompanying map the four divisions into which I would propose to district that part of the United States east of the 102d meridian.

Of the great Appalachian system of mountains, extending from New Brunswick to Alabama, I have made two divisions—one embracing Maryland, Delaware, Pennsylvania, New Jersey, New York, and the New England States; the other embracing West Virginia, Virginia, North and South Carolina, Georgia, Florida, Alabama, Tennessee, and Kentucky.

These two areas will include the whole Appalachian Mountain system in two parts of about equal geological importance; and, with the four divisions west of the 102d meridian, cover all the mountain country of the United States.

There remains, then, only the basin of the Mississippi, which, with all its enormous extent, is really one field and one geological problem. From its great size, however, I have thought best to divide it, as the lines upon the map will show, into two grand divisions; first, the Division of the North Mississippi, bounded west of the Mississippi on the south by a line including Missouri and Kansas, to the intersection of the 39th parallel with the 102d meridian. East of the Mississippi River the Ohio forms the dividing line between the Northern and Southern districts.

By placing each division under the charge of a geologist, whose personal experience and acquirements fit him to undertake the investigation of the chief problems of that division, and assigning to him a competent corps of assistants, a far better result will be obtained than by any plan of expeditionary operations, with parties moving from division to division. It is intended, on the contrary, to strictly confine each corps to its own division, and to keep it permanently at work there, except in case of certain technical economical investigations. In this respect the organization resembles that of the Army and the Coast and Geodetic Survey.

I have so arranged the initial work of the survey that special volumes on the most important geological subjects and mining industries in the four western divisions of the survey shall be brought to prompt publication. There can hardly be two opinions on the desirableness of immediately working out such problems in these great districts which in their past and present history offer examples of instructive geological structure and great bullion yield, and which have required of mining men special mechanical skill and large outlay of capital. Proper scientific reports on such typical districts become records of remarkable phenomena in the field of industrial geology and chronicles of distinguished success in the department of mining engineering. Among the great numbers of mining districts which merit rigid investigation I have chosen three, which more than others seemed to offer harvests of technical information, of which the mining population stands in immediate need. Leadville, the extraordinary district in Middle Colorado; Eureka, Nevada, which for fifteen years has been the most productive silver-lead district in America, and the incomparable Comstock Lode, are chosen as the first three districts to be illustrated by special monographs.

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#### MINERAL STATISTICS.

Foremost among all nations in the production of the precious metals, ranking first in resources of petroleum, coal, and iron, and abundantly endowed with nearly every mineral substance demanded by the civilized arts and sciences, the United States has conspicuously failed to gather and publish systematic statistical knowledge of the yearly mineral productions.

With the present rapid growth of industrial enterprise, with the complete interdependence of the arts, the least possible contribution to be made by the Federal Government should be a lucid, correct report of the production in each branch of mineral industry. Yet, legislators, economists, capitalists, and intelligent artisans are driven to scattered newspaper statements and the occasional disconnected publication of Federal and State governments for information which should be within the reach of all.



Important as a statistical and technical knowledge of crops is to the practice of agriculture and the disposition of its products, it is even more so in the department of mineral industry, since the mechanical arts in a multitude of instances depend on an artificial association of mineral productions from widely separated regions.

The accurate knowledge of the mineral resources of a given State by its manufacturers is not enough to foster successful industry. For the safe and profitable conduct of business, a knowledge of operations in other and the most distant States is often vitally necessary. For instance, the great iron industry of Michigan and Wisconsin depends largely on the utilization of its ores in distant States, in combination with ores of other States and the coal and flux of still others.

Silver ores, valueless from their rebellious nature at the mines which yield them, are transported into neighboring States, there mixed with others of differing chemical constituents, and profitably worked. Close the few quicksilver mines of California, and you close a greater number of gold mines in Georgia. Not to multiply illustrations, every master of the mechanical arts, every intelligent manufacturer, requires, either for the construction of his plant or the prosecution of his industry, a knowledge of the mineral resources not only of his immediate region, but of distant States.

It is estimated that the mere raw products of the mineral industries do not fall far short of four hundred millions of dollars annually, and it requires no gift of extraordinary foresight to reach the conclusion that a few years will bring the yield to a thousand millions.

Until Congress extends the field of the geological survey over the region east of the 100th meridian, this bureau will confine its own operations in the department of mineral statistics to the industries of the far west. For the present year, however, with the approval of the Secretary of the Interior, the geological survey has been intrusted by the Superintendent of the Census with the collecting of the statistics of the precious metals, iron, coal, petroleum, copper, lead, quicksilver, and zinc for the census. In order to conform to the requirements of laws governing the census and the survey, the Geological Director and several of the corps of geologists have been constituted special agents of the census, without pay from the census appropriation; and in addition to this small staff, experts, duly appointed by the Superintendent of the Census, have been detailed from the Census Bureau and ordered to report to the Geological Director.

By this combination of the forces afforded by the census with the survey, the director is able to make a thorough beginning, and will furnish the Census Bureau and Congress with a thorough exposition of the production of the metals, coal, and petroleum, the most important branches of the mineral industry. In this combined labor care has been exercised that only census employes should be detailed to work in the region east of the 100th meridian.

In the disposition of this force of experts, the region east of the 100th meridian has been placed under the charge of Prof. R. Pumpelly, who has personally directed the operation of gathering the statistics from his office at Newport, R. I., where he has remained in charge of the laboratory of the Geological Survey. The work in Montana, Dakota, Wyoming, Colorado, and New Mexico has been given to S. F. Emmons, geologist-in-charge, to be directed from his office in Denver. To George F. Becker, geologist-in-charge, were allotted the States and Territories of California, Oregon, Washington, Idaho, Nevada, Utah, and Arizona.

In order to successfully conduct so complex an investigation as the production and economies of the mineral industry, an elaborate series of schedules were framed during the past winter and put in print.

The scope of these codes of inquiry has been not merely an accumulation of data as to the output by weight and value of the mineral products, but it involves a deep analysis into the methods and economies of the successive steps of the industry.

It is proposed to arrive at a close approximation to the capital embarked and the money value of the plant now in use, to trace the cost of each process, to present a review and discussion of wages, and to state correctly the consumption of labor, power, and material; or, in other words, to give the aggregate cost of the various productions.

The technical schedules which form the basis of this inquiry relate to the following subjects: Metallic mines, coal mines, petroleum, charcoal-burning, hydraulic gold mines, hydraulic ditches, ore-dressing works, amalgamating mills, stamp batteries, pan amalgamation, roasting furnaces in amalgamating works, alternate amalgamation and concentration of battery sands, alternate concentration and amalgamation of battery-sands, arrastras, smelting works, preliminary operations for the same, smelting in shaft furnaces, smelting in reverberatory furnaces, desilverization by zinc, Pattinsonizing, improving of lead, cupellation, quicksilver reduction in general, quicksilver reduction in furnaces, quicksilver reduction in retorts, and quicksilver condensers.

Beside this, over the eastern half of the United States, where the work is wholly conducted from the funds of the census, the following mineral substances of commercial value are being investigated with a view to present a full report of the statistics of production and the technical methods of obtaining the commercial products:

Apatite,	Buhrstones,
Asbestos,	Borax,
Arsenic,	Bismuth,
Antimony,	Chrome,
Cobalt,	Manganese,
Copper,	Mica,
Corundum and emery,	Molybdenum,
Cements (hydraulic),	Mercury,
Fluor spar,	Niter,
Feldspar (for potash),	Nickel,
Gold,	Peat,
Grahamite,	Quartz,
Graphite,	Roofing slates,
Gypsum and plaster,	Serpentine,
Grindstones, millstones, hone-	Slate,
stones (novaculite, &c.),	Silver,
Glass sand,	Slate pencils,
Green sand,	Soapstone (steatite),
Infusorial earth,	Soda,
Iron ores,	Talc,
Iron pyrites,	Tin,
Kaolin,	Tungsten,
Lead,	Zinc.
Lithium,	

Upon each schedule is printed an extract from the census act of March 3, 1879, covering sections 14 and 15, and a notice that all the answers to the inquiries propounded by the schedule will be confidential as to each separate manufacturing or mining establishment.



The experts into whose hands the schedules have been placed for field work have been instructed to assure all producers of the confidential nature of the information given, so far as individual establishments are concerned. They are instructed to assure all mineral proprietors that the items of the schedules will only be used in preparing aggregates and averages for States, Territories, and counties, and for the discussion of purely technical results; but that in no case will such presentation of material be made as would expose the private business of any concern.

Under this assurance there have been almost no refusals to give the desired information. The schedules are being rapidly filled, and a mass of material is being accumulated which will enable the survey during the coming winter to produce a valuable statistical volume, which should furnish full and elaborate data for the discussion of nearly all the mechanical and technical stages of the processes which are employed in the industries of the metals.

While the schedules are, in general, amply full to cover all the essential details of the industries, the experts have been instructed to report any technical local peculiarities, and any interesting features in the geology or exploitation of mines; and all are required to return specimens, of a uniform size, of the ores and inclosing rocks of every mineral deposit visited. These specimens, carefully labeled, will amount to many thousands, and will form the most important economical feature yet added to the mineral department of the National Museum.

With the money and force at command, it is hardly to be expected that this first gathering of the statistics of the mineral industries should be either perfect or exhaustive, but enough results are now in hand to clearly prove that for general accuracy and for technical fullness the present investigation has never been approached. By the first of next January the full investigation will have closed, and it is hoped that the early spring will find the consolidated results ready for discussion and publication.

Beside the material to be furnished by the technical schedules, it is designed to present an account of the methods of discovery of precious metal deposits, the various legal aspects of their ownership, and a review of the chief features which characterize Western mining civilization.

The leading outlines of the various subsidiary industries which depend upon mining industry will be described; and, in general, the business methods by which mining towns grow up and are sustained.

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#### FORTHCOMING PUBLICATIONS.

The organization of the survey immediately followed the date at which the first appropriation of \$100,000 became legally available, and as that fell in midsummer, only half the ordinary time which the seasons permit was left for field operations. At the close of the present summer, therefore, the scientific staff will have labored only one and a half field seasons—a very short time to bring their special works to completion.

Realizing very fully, however, the natural desire of Congress and the Administration to see actual results and apply the test of a critical examination to the fruits of the new bureau, I have called upon the members of the corps for an energy and intensity of labor which should not be greatly prolonged, and which affords no measure of the rate of progress on small appropriations hereafter. The gentlemen of the corps have responded with such cheerfulness and enthusiasm that I am able to promise,

between the close of field-work this autumn and the opening of next spring's campaign, the completion of twelve volumes of practical and general geology and paleontology.

I give a brief and condensed foreshadowing of these memoirs.

#### MINING GEOLOGY.

**GEOLOGY AND MINING INDUSTRY OF LEADVILLE, COLORADO.** By S. F. Emmons, geologist-in-charge.

This work will consist of (a) A treatise upon the geology of a tract six miles square, embracing the chief mines of the Leadville district, discussing the geological and lithological disposition of the local formations in relation to the origin, nature, and extent of the ore deposits; (b) Elaborate topographical and geological maps in eight sheets, illustrating the areas surveyed and showing the special configuration of the surface, the occurrence of the rock formation, and the location of all mining openings on such a large scale as to serve as the basis for any future works of engineering for the exploration, connection, or deep drainage of the mines of the district; (c) A geological description of an area twenty miles square, including in its midst the six-mile block. The object of this division of the volume is to discuss and illustrate the general geology of the neighborhood in its relation to the larger dynamic history of this section of the Rocky Mountain chain. This is accompanied by (d) a topographical and geological map, upon which the described features are delineated.

The report will further contain (e) a special and technical description of the ore deposits, presenting especially such facts as bear upon the genesis, mineralogical constitution, area, tonnage, valuation, and continuance of the ores themselves, the economies of their extraction; and (f) an account of the processes of metallurgical treatment, and the yield and value of the metals produced.

In short, this book will, as far as the brief time given for its production allows, present to the public the scientific and technical information upon the Leadville district which is most anxiously desired by miners and students of mining geology and economy.

**GEOLOGY OF EUREKA MINING DISTRICT, NEVADA.** By Arnold Hague, geologist-in-charge.

This memoir is one of two upon the district of Eureka, Nevada. Its scope is purely geological, and it logically precedes a second memoir, which will be a technical treatise on the nature, position, extent, metallurgy, and production of the Eureka mines.

This district ranks first among those producing silver-lead ores. For a period of fifteen years it has maintained an almost unvarying prosperity; and, as a geological occurrence, an instance of vigorous mining, and an example of silver-lead metallurgy on a large scale, well merits the thorough and exhaustive treatment which it is proposed here to give.

Mr. Hague's volume gives the result of a close geological survey of a tract of country twenty miles square, embracing all the mines of the district.

Its leading interests will lie in the treatment of three special subjects: First, the great series of paleozoic strata, whose enormous bulk and thickness make up the great body of the rocks of the neighborhood; second, a series of dynamic events, which have broken this great body of paleozoic strata into individual blocks, and riven the beds with many fissures, some of which have given egress to repeated volcanic eruptions, while others have been the theater of vein action, and are now occupied

by the precious metal deposits upon which the industries of the district are based; and, third, the nature of the volcanic series themselves, and their relations to the ore deposits.

This report is accompanied by an elaborate topographical map of the area of twenty miles square in grade curves, executed under the direction of Topographer F. A. Clark. Upon this foundation will be shown, in color, all the geological features of the district as delineated by Mr. Hagne.

This map, like the detailed map covering the Leadville mines, is sufficiently accurate to serve for all future purposes of geological description or general mining study.

**THE COPPER ROCKS OF LAKE SUPERIOR, AND THEIR CONTINUATION THROUGH MINNESOTA.** By Prof. Rowland D. Irving.

This formation, which embraces a distinct geological series, has been for many years noteworthy as producing a large proportion of the world's annual output of copper.

The geological surveys of Michigan and Wisconsin have thrown much light upon the formation in their respective States; and the Canadian survey has identified the series within the Dominion of Canada.

This special work of Professor Irving has for its object the illustration of the passage of these rocks through Northeast Minnesota up to the British boundary.

It is of the utmost importance that every acre of the copper series should be known and located; and the report of Professor Irving will prove the existence of the series over a large area of comparatively new territory.

**HISTORY OF THE COMSTOCK MINES.** By Eliot Lord.

This volume forms one of a series of three devoted to the Comstock lode, incomparably the most valuable metal deposit known to modern times. It is impossible to embody in one report any account of the development of this great industry. Its history, its geology, and its mechanical industry have now expanded to such proportions that neither one volume nor one author is enough to cope with its abundant and rich materials.

Accordingly, I have laid out three volumes, all of which should be completed in time to present for publication before the opening of the field work next spring.

Mr. Lord's volume will describe the discovery of the Comstock lode, the great legal struggle for its ownership and possession, the singularly brilliant campaigns which the directors and owners of this wonderful deposit have made against the obstacles of nature for thirty years, in which brief period they have reached a depth only attained in Europe after three hundred years of unremitting toil.

The history of the Comstock is one of the most extraordinary exhibitions of American industrial activity which our varied enterprise affords; and this presentation of its characteristic features cannot fail to be of interest and benefit to all who, in the future of American mining, find themselves called upon to wrest from the earth its deep-hidden treasures.

This volume conducts the reader from the first discovery of the Comstock to the present day; and illustrates with great care the advance of mechanical skill and the peculiar economical features of the local labor question.

**THE COMSTOCK LODGE.** By George F. Becker, geologist-in-charge.

In his volume, Mr. Becker will discuss the character and distribution of the rocks of the Washoe district in their bearing upon the formation

of the Comstock lode. The deep penetration of the present mine openings, and the long gallery of the Sutro Tunnel, have brought to view new formations, unsuspected by the earlier writers upon the Comstock; and much new light is thereby thrown upon the succession of volcanic outflows which form the material of the country rock, and upon the chain of dynamic events which have followed one another from middle geological time, and united to form the Comstock lode.

This portion of the memoir will be accompanied by a geological map, executed by Mr. Becker on the basis of the topographical survey of the district lately completed by Capt. George M. Wheeler, Corps of Engineers, and kindly furnished by him to the Geological Survey.

Following the general geological discussion will be presented a full account of the lode itself, its dynamic history, vein structure, the discussion and classification of its materials, the form and mineralogical character of the bonanzas, together with their yield of the precious metals; also, a detailed account of the remarkable downward increment of heat which distinguishes these mines from all others upon the globe, and which renders their future exploitation not only a problem of capital and mechanical skill, but of the power of the human organism to exist and labor in the presence of intense moist heat.

This division of the report will be accompanied by an elaborate atlas, showing all the mine workings, up to date, embracing over two hundred miles of subterranean shafts and levels; and by a series of sections and projections, illustrating all the important details of structure of the lode as a whole, and the ore bodies in particular.

The volume will also embrace the results of a competent physiological study of the effect of the great heat upon the systems of the workmen.

#### **MECHANICAL APPLIANCES USED IN MINING AND MILLING ON THE COMSTOCK LODGE.** By W. R. Eckart, C. E.

The magnitude, complexity, and efficiency of the mechanical appliances in use at Washoe have kept pace with the rapid development of the mining industry, until, at the present day, the more important machines are of great mechanical interest.

It is designed in this volume to present descriptions and discussions of the form and construction of the more important machines and appliances, illustrating them with elaborate working drawings, not only of the machines as put together and in use, but of all the more important detailed parts.

The volume will also present a mechanical and mathematical discussion of their actual and relative efficiencies based upon the consumption of fuels whose calorific powers are scientifically determined and accurately related to the question of cost.

#### **COAL OF THE UNITED STATES.** By Raphael Pumpelly, geologist-in-charge.

This volume will convey a statistical review of the present production of coal from all the coal-fields of the Union.

It will present a classification of the different coal-fields, an account of the character and thickness of all beds now worked, a tabular statement of the output, with the consumption of capital, labor, power, and material used in the annual production.

It will further detail the character of the more important plant, and illustrate the different systems of labor utilized in the industry. From Seattle to Alabama, from Rhode Island to New Mexico, every considerable coal mine now in operation will have been visited and technically examined, and this extensive labor will have been wholly executed from

the funds of the Census, and by experts of the Census, both of which have been furnished by General F. A. Walker.

The scope and character of the inquiry, together with all the elaborate, technical schedules necessary for the proper conduct of the investigation, have been devised, directed, and will be finally discussed by Prof. Raphael Pumpelly, of the Geological Survey.

**IRON IN THE UNITED STATES.** By Raphael Pumpelly, geologist-in-charge.

This work, another joint labor of the Census and the Geological Survey, has been executed by Professor Pumpelly from the funds and by means of the experts of the Census.

As in the case of coal, all technical preparations for the study, the laboratory, with its enormous amount of chemical investigation, and the entire direction of the work, have been furnished by the Geological Survey.

Professor Pumpelly will not only give the statistics of production, but will show the distribution of the great iron fields, and their relation to transportation, fuel, and market. He has furthermore added an investigation of the utmost technical interest to the whole industry, namely, an elaborate chemical survey of the great iron fields, showing, in the main, the distribution of iron and its association with the various chemical accompaniments, both those which are of advantage and those which are deleterious.

This chemical survey of the iron fields will afford a large view of the special distribution of each chemical type of iron ore.

As in the case of coal, the memoir will contain an account of the capital, labor, power, and material consumed by the industry during the census year, and numerous tabulations of technical points of value to those engaged in the iron industry, as well as to all students of American political economy.

**THE PRECIOUS METALS.** By Clarence King, director.

Division 1 of this volume is devoted to the discovery of the precious metals in the every-day current prosecution of the industry.

It will endeavor to fully illustrate the manner in which the precious metals, veins, and deposits are now discovered in the great West, embracing an estimate of the number of prospectors engaged in this singular pursuit, their mode of life, nationality, habits, migrations, and discoveries.

It will embrace a tabular statement of the number of mines officially located during the past year.

Division 2 will describe and explain the legal steps which constitute the ownership of claims from their discovery up to the time when they became operated mines. The number of conveyances of precious metal claims by deed in the whole United States will be shown; the laws, Federal, State, and Territorial, under which these ownerships obtain, will be cited and commented upon; and an historical sketch will show the origin of the local laws and customs which have sprung up spontaneously throughout all the western mining region, and which, by a process of change and evolution, have given rise to the present controlling Federal legislation.

In addition to this tables will be given showing the number of mines owned and worked privately, the number held in corporate ownership, with the corporations localized in different States and Territories, and finally, a discussion of the system of mining corporations in relation to corporation laws and stock-board regulations, wherever American mines are owned, including France, England, and Holland.



Division 3 will consist of the results of a technical examination of the precious-metal mines of the United States (gold, silver, and quicksilver), which will embrace a statement of actual production for the year, localized by States and Territories, and full, technical statements of the characteristics of the industries, showing by elaborate tables the consumption of capital, labor, power, and material.

Division 4 will consist of a statistical and politico-economical study of the general aspect of the mining industry, its relation to locality and population, the civic institutions and business methods which have grown up in mining communities, and the legal and financial machinery by which this singular business is conducted. In the technical portion the director is aided by S. F. Emmons and G. F. Becker, of the survey staff, and in the department of political economy by Eliot Lord.

**LESSER METALS AND GENERAL MINERAL RESOURCES.** By Raphael Pumpelly.

This work, like the memoirs on coal, iron, and the precious metals, is made from the funds of the Census under the conduct of the Geological Survey.

The report will contain statistical statements of the production of the lesser metals—lead, copper, zinc, bismuth, chromium, cobalt, nickel—together with a partial review of the production of the following substances: Apatite, asbestos, arsenic, antimony, buhrstones, borax, bismuth, chrome, cobalt, copper, corundum and emery, cements (hydraulic), fluor-spar, feldspar (for potash), grahamite, graphite, gypsum and plaster, grindstones, millstones, honestones (novaculite, &c.), glass sand, green sand, infusorial earth, iron ores, iron pyrites, kaolin, lead, lithium, manganese, mica, molybdenum, mercury, niter, nickel, peat, quartz, roofing slates, serpentine, slate, slate pencils, soapstone (steatite), soda, talc, tungsten, &c.

The above four volumes, joint works of the Census and the Geological Survey, together with statistics of petroleum to be furnished us by General Walker, will enable us to present the first general summary of the leading mineral productions of the United States.

Owing to the insufficiency of money and means, and the enormous multiplicity of industries and wide extent of territory, it has been impossible to make an exhaustive survey of some of the really important substances, such as clay, building-stones, fire-clay, hydraulic cement, salt, alkalies, borax, &c.

It is intended that the statistical portions of these four volumes shall be combined in one volume on the mineral resources of the United States, which shall form the first of an annual series to be brought out by the Geological Survey.

It will be seen by the above notes of forthcoming volumes that a very large proportion of the labors of the survey has been given to purely economical questions. The Director felt that, with the mineral industries in their present hopeful condition, and in view of the wide-spread ignorance of the magnitude, importance, and technical facts of these industries, it was his duty to bend the energies of his bureau first of all to the production of immediate results of strictly practical value.

A very small proportion, therefore, of the funds and force at his disposal have been diverted into the department of pure geology. Three volumes, however, are forthcoming.

**UINKARET PLATEAU.** By Capt. C. E. Dutton, Ordnance Corps, geologist-in charge.

A very large amount of geological work, of which some interesting portions were nearing completion, have been inherited by this bureau from the geological survey lately under charge of Maj. J. W. Powell.



Of these, the district of the Uinkaret Plateau, bordering the great cañon of the Colorado, forms one of the most interesting parts. Capt. C. E. Dutton, of the Ordnance Corps, having been placed in charge of the division of the Colorado, is bringing to a close his geological examination of this peculiar district.

His report, accompanied by topographical and geological sheets, and illustrated by geological views from the pencil of Mr. Holmes, cannot fail to be an important contribution to our geological knowledge of one of the most striking features of the earth's crust.

**LAKE BONNEVILLE.** By G. K. Gilbert, geologist-in-charge.

It has been well known to the geological world for several years, through the writings of Mr. Gilbert and of the Director of the survey, that the basin of Utah is the bed of a great extinct lake, whose existence is as clearly proven as that of any of the existing seas.

This remarkable sheet of water existed in the glacial age, immediately preceding the present geological period. Its area was fully equal to that of Lake Huron.

Unlike the other extinguished oceans of the past, whose existence has been caused by the upheaval of the earth's crust, this lake has vanished from purely climatic causes.

It has simply dried up, leaving a few residuary lakes, of which Great Salt Lake is the chief. In the process of desiccation it has left a wonderful record of climatic oscillations and variations.

The desert climate of Utah and Nevada is one of the interesting physical features of the United States, and the oscillations of the moisture of this climate through periods of years since the occupation of these Territories by American emigrants have given rise to eager speculation.

Is the desert growing still drier or is it gaining in moisture are questions upon the lips of every intelligent settler in that region.

The volume of Mr. Gilbert will show the character and magnitude of those past climatic oscillations which have changed the aspect of the basin of Utah from a well-watered and green area to a country wholly desert, except when reclaimed by the enterprise of man.

Mr. Gilbert's volume is illustrated by topographical maps of the extinct lake, and numerous maps and diagrams showing the geological action of the receding waters.

**DINOCERATA.** A monograph on an extinct order of Ungulates. By Prof. O. C. Marsh, paleontologist.

This volume is a detailed monograph, illustrated by fifty-five quarto plates.

Among the recent geological discoveries in the Western Territories none is more remarkable than the bringing to light of enormous amounts of the remains of extinct animals.

The great collections of Cuvier from the Paris basin are already eclipsed by the immense yield of fossil bones from the Tertiary and Cretaceous strata of the far West.

This volume embraces a complete exposition of a new zoological order peculiar to America, and possesses high scientific importance as a contribution in the field of American paleontology.

#### FUTURE OF THE SURVEY.

In the history of the United States—whatever may be the political or social result of this century, whatever may be the final adjustment of the machinery of national government—upon one great field of American

activity, the pride of to-day and the judgment of the future will agree. That field is the development of our material resources. In the industrial conquest of a continent the tide of victory has never ebbed.

In possessing ourselves of this broad, virgin area we have shown a power, unprecedented in the slower past, to discern, to seize, and to utilize the national wealth with which the United States is so liberally endowed.

With an energy never relaxed, with an originality which has revolutionized and improved nearly all industrial methods, we grasp the problem of material development, and grasping, solve it. Just as is the pride of all Americans in this signal achievement, every intelligent student of the country knows that we are yet at the very threshold of the industrial life of the Republic. We have only begun; we have the great work still before us.

The modern method of distributing population by means of that network of railroads which is rapidly threading the last remaining wilderness, greatly accelerates the progress of the industries. There are no longer blanks on our maps marked "unexplored," nor are there untrodden fields for the pathfinder. The epoch of the pioneer is practically passed. Our fifty millions will equalize its grasp on the different sections by rapid migration till the population finds an equilibrium with the local resources. That equilibrium will soon be attained. Our real industrial problem is, then, to utilize with the highest technical skill and with the utmost scientific economy all elements of national wealth.

As a general proposition, it is true that the practical genius of the people, acting in the political and social freedom peculiar to our system of government, is enough to insure the success of our industrial efforts. At the same time, the government which grants and secures this freedom of action, has the power, and, I hope to show, the duty to bestow one sort of aid which can come from no other hand.

The great extent of the United States and the widely separated sources of the national resources render the acquisition by private citizens of information on almost any single product always difficult, often impossible.

As a direct result of the size of the country, the government and people have long been uninformed as to our primary industries; those, I mean, which yield the raw materials—mineral, vegetable, and animal.

To the Agricultural Department we owe the first reforms from this condition of wide-spread ignorance. In the realm of mineral productions the only efforts made to acquire any positive knowledge have been the highly useful, but feebly endowed, works of the late mining commissions, whose investigations were suffered to end for lack of appropriations.

To-day no one knows, with the slightest approach to accuracy, the status of the mineral industry, either technically, as regards the progress and development making in methods, or statistically, as regards the sources, amounts, and valuations of the various productions.

Statesmen and economists, in whose hands rest the subjects of tariff and taxation, have no better sources of information than the guesses of newspapers and the scarcely less responsible estimates of officials who possess no adequate means of arriving at truth.

In no other intelligent nation is this so; on the contrary, mineral production is studied with the most elaborate effort. England, France, Germany, Austria, Russia, and Italy consider it essential to know, from year to year, not only the source and aggregates of amount and value of mineral yield, but many lesser facts relating to the modes and economies of the industries.

Upon considering the extent of country over which our minerals occur, their wonderful variety and yet unmeasured amounts, it cannot fail to be apparent that no private individual or power is competent to do what ought long since to have been done, namely, to sustain a thoroughly practical investigation and exposition of the mineral industry.

By way of example, and to show how hopeless it is to look to any other source than the government for this service, I select iron.

The best instance of what private association has done in the acquirement of knowledge relating to an American mineral industry is the result reached by the "Iron and Steel Association"; but a glance at their highly valuable performance shows how fragmentary and imperfect it is, and inevitably must be.

Individual States, notably Pennsylvania, Michigan, Wisconsin, Missouri, and Kentucky, have made admirable contributions to the knowledge of American iron, but no common plan underlies their works. They have barely skirmished along the picket lines of the business.

I apprehend no economist, legislator, iron-master, or mine owner would for a moment hesitate to admit that the sum total of information now available on the subject is utterly insufficient for the most intelligent and profitable pursuit of the industry.

The very foundation facts as to the exact chemical nature, geological occurrence, and geographical location of available iron bodies are unknown. In the roughest and most general way perhaps they are known, but in detail, and with the exactness required by modern metallurgy and modern economy, they are not.

The adaptability of iron ores for the increasing number of delicate processes designed to produce special products to meet particular mechanical needs, depends on the presence or absence of minute quantities of accessory elements in the ore. To-day we are ignorant of the presence or quantity of these minute but controlling factors of chemical composition, except in ores of the more important and actually operated mines. As to the great bulk of the ore deposits our knowledge is blank.

The points required to be known by the iron industry are many. Chief among them are the following:

1. Geographical and geological. The position of all iron fields should be known and shown on accurate maps. Besides the general areas embracing groups of iron districts, each special district should be carefully mapped, and the geological relations, size, form, and mode of occurrence of each iron ore body or iron stratum should be illustrated by appropriate graphical methods. In this department the work should not stop with an exhibition of ores already discovered or outcropping upon the surface, but the iron areas should be constantly enlarged by the careful working out of the subterranean bodies by magnetometrical and stratigraphical methods known to geology.

2. Chemical and mineralogical. Every iron-ore occurrence should be analyzed, so that its percentage of iron, its mineralogical characteristics, its tenure of the minutest amounts of foreign substances, valuable or injurious in metallurgy, should be definitely known.

3. Metallurgical association. Besides the geographical, geological, mineralogical, and chemical facts above indicated, it is also required to know the location, metallurgical character of all the fuels and all the fluxes, and all the refractory material which must in the economy or necessities of the industry be brought together to produce iron.

In a few rare instances all these requisite materials are found in conjunction; in a vast majority of cases they are brought together from distances, which the growing cheapness of transportation is day by day increasing.

An ore from Virginia may be best smelted at Baltimore, when mixed with another from Michigan, by means of a fuel from Pennsylvania and a flux from Maryland. Products the most distant are thus daily brought together and consumed in the blast furnace.

The size of the United States and the wide distribution of iron ores and industries render it unavailing for private individuals or corporations to attempt to gather full knowledge concerning them; and, even if acquired, the competition of trade would hide it securely from the public.

It is the height of absurdity to expect all the iron-producing or iron-containing States to undertake simultaneously an investigation of this problem. If by some miracle of concurrent legislation all such States were to inaugurate the work, it would fail miserably for the want of that very comparative study and unity of method which a single well-directed corps, operated over the whole field, alone could insure.

In order to master this subject, a government corps of geologists, topographers, mining engineers, metallurgists, and chemists is necessary; and this corps must be so directed as not only to inquire into local facts and details, but to institute careful comparison of districts, so that the facts learned in one place may be made to throw light on all others.

To claim that the iron question will ever be adequately investigated as a whole, either by private enterprise or State surveys, is to betray a total lack of appreciation of the character, magnitude, and needs of the industry.

What is true of this single metal is equally true of nearly the whole catalogue of the mineral products of the United States. A few exceptional items, like quicksilver, occur in such restricted areas that private or State enterprises could contribute all the knowable facts and features of the business of production. But as a whole it is true, and can never be refuted, that the Federal Government alone can successfully prosecute the noble work of investigating and making known the natural mineral wealth of the country, current modes of mining and metallurgy, and the industrial statistics of production.

Provided Congress extends the field of the Geological Survey over the whole national territory, and appropriates the comparatively small amounts necessary for the maintenance of the organization, it will be entirely practicable to carry forward this work, and contribute powerful aid to the mineral industries. Of the desirableness, from every point of view, of the results of a general geological survey, I conceive there cannot be two opinions. That these results can only be attained by an organization under Federal patronage, is, in my opinion, scientifically certain.

Granting these two propositions, which the foes of progress may vainly strive to disprove, and there remain but two questions worthy of serious consideration regarding the future policy of this bureau. These are, first, has the Federal Government the Constitutional authority to make a geological survey over the State? and, secondly, can this nation afford the money to maintain such a survey?

In regard to the question of authority, it may be said that the Federal right derived from the Constitution to regulate internal commerce could hardly fail to carry with it the correlative right to gain a knowledge of those commodities and products which are the very material and basis of commerce; without this knowledge commerce is mere *transportation*.

From every analogy of past legislation, Congress has clearly assumed to possess the requisite authority. If it can investigate agricultural industry and maintain a department to execute that branch of inquiry, why not investigate mineral industry? If it can make a coast and



geodetic survey over the whole United States, why not a geological survey?

Since the Constitution empowers the Federal Government to levy taxes upon the industries of the nation, there would seem to be a failure in the logic which should deny to it the implied power of informing itself as to the nature and extent of those industries.

Regarding the cost of the Geological Survey, if organized upon a permanent basis, with its jurisdiction extended over the entire United States, there need be no apprehension of the necessity for extravagant amounts.

Five hundred thousand dollars a year, the sum for a long time annually appropriated for the Coast and Geodetic Survey, will be sufficient to carry on all the work which is either necessary or desirable over the whole United States.

Beyond that scale it will not be necessary to go, and with that annual amount a report could be produced annually in each of the eight divisions of the survey which would be of inestimable value to the people and industries of each geographical section.

It is earnestly recommended that Congress extend this work over the whole United States, and place it on a basis of five hundred thousand dollars per year.

The mineral industries of the United States will soon reach an annual money yield of a thousand million dollars of value. The small Federal appropriation of half a million a year toward the development of this great field of American enterprise is certainly not an excessive contribution.

I have the honor to be, very respectfully, your obedient servant,

CLARENCE KING,  
*Director.*

## REPORT OF THE COMMISSIONER OF PENSIONS.

DEPARTMENT OF THE INTERIOR,  
*Pension Office, November 1, 1880.*

SIR: I have the honor to submit the following annual report for the fiscal year ending June 30, 1880:

There were on the 30th of June last 250,802 pensioners on the rolls of the several agencies, a net increase since last year of 8,047. The list consists of 133,212 Army invalids, 78,772 Army widows, minor children, and dependent relatives; 2,060, Navy invalids, 1,870 Navy widows, minor children, and dependent relatives; 10,138 surviving soldiers and sailors of the war of 1812, and 24,750 widows of deceased soldiers and sailors of that war.

There have been added to the pension list within the year, 19,545 names of new pensioners, and 1,377 others restored to the rolls which had previously been dropped. There were dropped from the rolls during the year, for all causes, 12,875 names.

As the rates stood on the 30th of June the annual pension to each pensioner averaged \$103.34, and the annual aggregate pension of all the pensioners was \$25,917,906.60. The actual annual payments, however, exceed this sum by several million dollars.

The pensions paid during the year, exclusive of the arrears referred to below, amounted to \$37,046,185.89. Of this sum \$12,468,191.20 were first payments upon newly allowed pensions.

The amount appropriated to meet these payments, exclusive of the salaries and expenses of the agents, was \$37,659,000.

The act of March 3, 1879, appropriated for the payment of arrears due upon pensions which had been allowed previous to January 25, 1879, the date of the approval of the arrears act, the sum of \$25,000,000 for the pensions, and \$15,000 for expenses of disbursement, of which \$3,933,386.63 was paid out in May and June, 1879, and \$19,980,808.23 during the fiscal year ending June 30, 1880, leaving of the appropriations act of March 3, 1879, a balance of \$1,098,334.04 available for the payment of the arrears of pensions, and \$2,471.10 for the expenses of disbursement. An additional appropriation of \$500,000 for the arrears was made May 31, 1880, so that at the commencement of the present year there was available for the payment of the arrears of pensions \$1,598,334.04, and for expense of disbursement \$2,471.10.

In this connection your attention is invited to a classified statement of the pensioners on the rolls of each agency, which also compares the whole number of the pensioners of each of the agencies with the number June 30, 1879, and shows the total disbursements for pensions, including salaries and expenses of pension agents, made at each agency during the year.

The appropriations for the payment of pensions for the current year, exclusive of the salaries and expenses of the pension agents and the fees of examining surgeons, amount to \$32,050,000. This will be inadequate. As nearly as can now be estimated additional appropriations will be required of \$17,500,000 for Army pensions and \$700,000 for Navy pensions. The extent of the deficiency depends so entirely upon the number of new pensioners who will be placed upon the rolls during the balance of the year, it will be understood that the estimate is quite speculative, and liable to fall below the actual requirements. The appropriation for naval pensions is now nearly exhausted.

Table 4 is a comparative yearly statement showing year by year from 1861 to June 30, 1880, the number of original applications for pension which have been filed and the number allowed, the number of pensioners on the rolls at the end of each fiscal year, and the annual disbursements for pensions, including the salaries and expenses of the pension agents.

#### SETTLEMENT OF ARREARS.

In a communication which I had the honor to address to you on the 4th of February, 1879, relative to the arrears act of January 25, 1879, the number of pensioners who would be entitled to arrears under its provisions was estimated at 45,155, and the amount which would be required to pay them their arrears of pension was estimated in round figures at \$34,000,000, and at \$25,000,000 if the act should be amended so as to equalize the pensions according to a suggestion which was contained in the same communication. (Ex. Doc. No. 75, 3d session Forty-fifth Congress.) On the 3d of March, 1879, the law was amended substantially as suggested.

Down to the date of this report the arrears of 43,917 of those entitled have been adjusted, and the amount found due them is \$24,600,487.27, an average of \$560.58 to each pensioner. If all the remaining 1,238 cases shall come forward and the average amount due be the same as in the cases already settled, the amount required for the payment of the arrears will exceed the estimate of \$25,000,000 by \$293,963.66. It will be observed that the rates at which the arrears have been adjusted in detail exceed the average of the estimate upon the whole 45,155 cases less than one cent and two mills on the dollar, which, under the circumstances of the adjustments, is an exceedingly slight difference.



This result fully vindicates the plan adopted for rating the arrears, and speaks highly for the unprejudiced judgment and skill of the clerks who were employed upon that work, and particularly of Capt. C. F. Sawyer, who has had charge of all matters touching the settlement of these cases.

Table 5, to which your attention is invited, shows the history of the settlements month by month from April, 1879, when the first cases were adjusted, to October 31, 1880. Nearly six-sevenths of all the cases in which arrears was supposed to be due were settled by the end of September, 1879, and as the work progressed the settlements were distributed in equitable proportions among the pensioners throughout the country.

The clerical labor connected with these settlements has been very great. Formal applications for arrears have been presented in 76,713 cases, and informal applications by letter or personal verbal request by the pensioners and their friends, of which no record was preserved, in not less than 25,000 other cases.

All of these have been drawn from the admitted files and the papers examined, and if the applicant was found entitled to arrears the same was adjusted and an arrears certificate issued, and if not entitled a letter addressed to him or her stating the fact with the reason why no arrears was due. A great number of these cases, both those in which arrears was found to be due and those in which none was due, have been called up after decision from once to several times each; the former for a review of the rate at which the arrears had been adjusted, and the latter either upon a protest against the unfavorable decision or to obtain further explanation of the ground upon which it was based. It is estimated that these reviews in the aggregate have been nearly, if not quite, equal in number to the original examinations. Not less than four-fifths of the whole labor connected with the arrears settlements was performed within the last fiscal year.

#### FILING, SETTLEMENT, AND ACCUMULATION OF CLAIMS, AND CONDITION OF THE FILES.

During the nineteen years from June 30, 1861, to July 1, 1880, 412,459 original claims for invalid pension (Army and Navy), and 278,488 claims in behalf of Army and Navy widows, minor children, and dependent relatives were presented, and there have been placed on the pension rolls 168,856 of the invalids, and 193,494 of the widows, minor children, and dependent relatives.

Under the acts of February 14, 1871, and March 9, 1878, granting pensions on account of service in the war of 1812, 34,339 claims of surviving soldiers and sailors, and 40,020 widows of deceased soldiers and sailors of that war had come forward; 25,470 of the survivors and 29,898 widows had been pensioned.

There were in the files of unsettled cases on the 30th of June last 309,023 original claims of all classes from the Army, and 6,734 from the Navy. In addition to these there were 12,063 claims for increase of pension (Army and Navy), 3,217 claims for pension on account of service in the war of 1812, and 2,469 claims for bounty land warrants.

Several thousand of the claimants in the Army and Navy original cases died before their claims were settled. In a portion of these the papers have been consolidated with the claims of the widows, minor children, and dependent relatives of the soldier, and are not counted in the foregoing enumeration of claims in the files. The cases of the others who

have died leaving their claims unsettled, as well as the cases of those who have abandoned their claims, are counted. The number of claims belonging to the two last-named classes cannot be certainly ascertained, but are estimated at 33,162, leaving 282,597 live original claims of the Army and Navy classes at the close of the year, besides 17,749 claims for increase of pension, for pension on account of the war of 1812, and for bounty-land warrants.

The claims on account of Army service during and subsequently to the war of the rebellion are settled in nine separate divisions, the organization of which will be described further on. The unsettled claims in each of these divisions on the 30th of June last have been tabulated to show the number of invalid and widows' claims, respectively, which were filed in each of the several years since June 30, 1861. The result is shown in Table 6. The unsettled Navy claims are distributed over the period in about the same proportion as the Army.

Claims have been allowed during the year as follows: 10,176 Army and Navy invalids; 4,455 Army and Navy widows, minor children, and dependent relatives; 4,914 on account of the war of 1812; and 1,377 pensioners have been restored to the rolls; 8,991 Army and Navy claims for increase of invalid pensions; 295 Army and Navy widows' and minor children's increase. Besides these there have been allowed 191 claims for bounty-land warrants, and 29,662 claims for arrears of pension. (Table 7.) The number of original Army and Navy pensions allowed is greater than in any year since 1871.

In view of the great increase in the clerical work outside of that pertaining to the settlement of the cases, growing out of the new claims filed, and the increased correspondence, and the additional labor connected with the preparation of the new record, the result of the year's work is very gratifying.

#### NEW RECORD OF CLAIMS.

The last annual report made reference to the records of claims as follows:

And to increase the difficulties of the situation, the records of the receipt and disposition of the claims in the office, which had long been felt to be based upon a system unequal to the demands of so extensive a business, and had been the subject of much study with a view of adopting another system as soon as a proper one could be decided upon, proved to be entirely insufficient under the great load of new claims and the multitude of inquiries in the old claims which has followed the passage of the arrears act, and it became necessary to enter at once upon the preparation of a new record of the Army claims which originated or might originate subsequently to March 4, 1861.

The records of these claims have been kept in two series of numbers, one for invalid claims and the other for widows (the latter class including children and dependent relatives), and in two corresponding three-letter alphabetical lists. To illustrate: All surnames the first three letters of which are the same in order are recorded together; the combination "SMI" in the invalid list includes 4,500 names; "WIL," 4,900; "BRO," 3,400; "HAR," 3,900; "CAR," 2,700, &c.

The labor of searching for the name of John Smith, Company A, Sixteenth Illinois Volunteers, is therefore very great, and, besides, the searcher is liable to overlook the name, and this may result in the filing and prosecution of two claims by the same claimant, or in the office informing an inquirer that no such claim has been filed, or in some embarrassing confusion of claims; and these mistakes occur quite frequently with the most practiced and careful searcher, and as the names increase in number the labor and difficulty attending the search of necessity increases.

The system for the new record will separate the names of applicants into their proper military organizations, and a search for the name of John Smith, Company A, Sixteenth Illinois Volunteers, will be confined to the members of his own company who have filed applications for pension, or on account of whose service a widow's claim has been filed.

It is apparent that under such a system there will be great economy of time and

labor, and mistakes in searching will be next to impossible except through inexcusable carelessness on the part of the searcher, which has its easy remedy.

The labor of preparing the new record is very considerable; it was commenced in June last, and will probably be completed by February or March next, and until then the old system must be maintained.

My expectations as to the date when these records would be completed have been disappointed; they are not yet complete, although a portion of them are now being used in the current work of the office.

The labor connected with their preparation has been very great as well as difficult. Since 1861, these records have been several times transferred from old books to new by copying, and many clerical errors had occurred which it was necessary to eliminate, and the comparisons and searches have consumed much more time than was anticipated. There has been, however, no disappointment in regard to the advantages to be realized from the new records. The experience already had with them shows that one clerk is easily able to make as many searches as five or six could do with the old records.

The comparisons and searches made in the preparation of these records have already discovered more than three thousand duplicate claims for pension and fifty-three cases in which two pensions had been granted the same person, not before discovered. Many cases have also been discovered where the soldier, having filed a claim, died before he was pensioned, and the widow or other relative coming in, the soldier's claim was overlooked, thus depriving the widow or other relative of the benefit of evidence essential to the establishment of their claims which the soldier had filed.

These discoveries alone will fully compensate the government for the expense of preparing the new records, to say nothing of the increased facilities which they afford for the transaction of the business of the office and its greater protection against future duplicate claims and pensions.

The new records will comprise 176 volumes of 250 pages each. These, when complete, will contain the claims for pension on account of service in 2,268 regiments, 194 battalions, 706 independent companies, 208 batteries, and 46 staff corps.

#### REORGANIZATION OF DIVISIONS AND REARRANGEMENT OF THE FILES.

Your attention is invited to Table 8, showing the average number of claims of each of the several classes filed per month during the year ending June 30, 1878, and the average per month from July to December, 1878, inclusive, and the number each month from January, 1879, to October, 1880, inclusive.

The great increase in the number of claims following the passage of the arrears act, together with the increased number of claims previously filed which were called up and pressed for settlement, including many thousand which were revived by that act, overloaded the system of record and files to such a degree that it was not only impossible to record the claims as they came forward, but the letters of inquiry and additional evidence accumulated to such an extent as to threaten the utmost confusion.

As already stated, a new system of records was devised, but the new records could not be prepared for many months, and not early enough to meet the emergency. Congress was about to convene, and with its presence a great increase in the correspondence was to be expected. A new plan was at last hit upon for reorganizing the clerical force em-

ployed in the Invalids' and Widows' Divisions, and arranging the files to correspond, which promised partial relief, and has enabled the office to escape the confusion which seemed imminent and considerably increased the number of settlements.

The principal advantages derived from this arrangement are found in the division of the cases so that a more intelligent judgment can be brought to bear upon the evidence than was possible under the previous organization, and in the facilities which it furnishes for quickly finding the file pertaining to any particular case when the number of the claim and the State from which the soldier served is known. In all such cases it relieves the records of all searches; with this data the file clerk can at once place his hand upon the proper file.

The change is regarded of such importance as to justify the insertion of a copy of the order organizing the new divisions. Table 6, before referred to, shows the whole number of original claims upon the files of each of the nine new divisions on the 30th of June last, and the number filed in each year since 1861 remaining unsettled.

290.

DEPARTMENT OF THE INTERIOR,  
PENSION OFFICE,  
Washington, D. C., November 20, 1879.

**ORDERED:** *The Invalid and Widows' Divisions* are abolished. Their files will be consolidated and arranged by States, keeping the invalid and widows' claims separate, and each class in numerical order in its series.

Nine new divisions are created, to have charge of the settlement of the claims in these files, as follows:

1. *New England Division* (C. L. Whelpley, Chief), to be in charge of the claims on account of military service in organizations belonging to the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.

2. *New York Division* (Fred. Mack, Chief), to be in charge of the claims on account of military service in organizations belonging to the State of New York.

3. *Pennsylvania Division* (J. R. Van Mater, Chief), to be in charge of the claims on account of military service in organizations belonging to the State of Pennsylvania.

4. *Ohio Division* (F. D. Stephenson, Chief), to be in charge of the claims on account of military service in organizations belonging to the State of Ohio.

5. *Indiana Division* (F. W. Poor, Chief), to be in charge of the claims on account of military service in organizations belonging to the States of Indiana and Michigan.

6. *Illinois Division* (George A. L. Merrifield, Chief), to be in charge of the claims on account of military service in organizations belonging to the State of Illinois.

7. *Iowa Division* (John M. Comstock, Chief), to be in charge of the claims on account of military service in organizations belonging to the States of Iowa, Wisconsin, Minnesota, Kansas, Nebraska, Colorado, California, Nevada, and Oregon, and the several Territories.

8. *Southern Division* (L. E. Dickey, Chief), to be in charge of the claims on account of military service in organizations belonging to the States of Missouri, Kentucky, Tennessee, Arkansas, Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Virginia, and West Virginia.

9. *Washington Division* (C. H. Ilickox, Chief), to be in charge of the claims on account of military service in organizations belonging to the States of Delaware, Maryland, and New Jersey, and the District of Columbia, and the several organizations of the Regular Army, and colored troops, and in all other general organizations not belonging especially to any State or Territory.

These divisions will each be organized with three principal examiners, who will be designated by the Commissioner; and one of whom, in the order named in the assignment, will, in the absence of the chief, act in his place.

J. A. BENTLEY,  
Commissioner.

#### INDIAN PENSIONERS.

Three regiments of troops, First, Second, and Third, Indian Home Guards, were raised among the Indians of the Indian Territory, to serve in the Union Armies in the late war. Several hundred claims for pension



based upon service in these organizations have been filed. The character, habits, and customs of the Indians rendered it difficult and even impossible in most cases for the claimants to establish their right to pension by the usual methods and under the rules and regulations of the office. Early in the year 1866, Ex-Secretary Harlan undertook to bridge these difficulties by sending to the Territory George C. Whiting, who was instructed to inquire into the merits of the claims and was authorized to make payment to those whom he found to be entitled. Mr. Whiting settled and paid the accrued pension in about one hundred cases; other pensions were afterwards allowed, and altogether 178 were allowed on account of this service before the beginning of 1871. About this time, or perhaps earlier, facts were brought to the attention of the office indicating that both the government and the pensioners and claimants were being defrauded by their attorneys and others connected with the cases; and the papers in the admitted cases, as well as those belonging to three hundred and twenty-three others which were pending, were placed in the hands of Messrs. F. E. Foster and G. E. Webster, with instructions to investigate the alleged frauds.

On the 18th of July, 1871, upon the report of Special Agents Foster and Webster, the payment of all the pensions which had been allowed and the further consideration of the pending claims was suspended.

On the 20th of January, 1872, payment of 42 of the pensions was resumed, but their payment was again suspended on the 5th of February, 1873. Except two pensioners who have been paid through inadvertence, no payments have been made in any of the cases on account of the service mentioned since February, 1873.

After the passage of the law contained in section 4721, Revised Statutes, act of March 3, 1873, consideration of the pending claims was resumed and continued until June 6, 1874, when the consideration of the claims was again suspended because the evidence which was being produced was so unreliable and unsatisfactory as to preclude intelligent and proper action.

On the 11th of October, 1875, the papers both in the cases which had been admitted and those pending were placed in the hands of C. W. Seaton and W. T. Vandoren, who were directed to again investigate them.

It appears that no action was taken upon their report, since the pensions and the pending claims remained suspended, until the 12th of August, 1879, when the papers in all the cases were placed in the hands of Messrs. A. Vangueder and T. Shailer, with ample instructions and discretion, written and verbal, to proceed to the Indian Territory and make another inquiry into the merits of the respective cases.

Mr. Vangueder had served in the same campaigns with the Indian regiments for two years and upwards, and for more than one year was brigaded with them, and was, therefore, peculiarly qualified for this inquiry. The task imposed upon these gentlemen was successfully accomplished, as will appear from the following summary of the present condition of the claims:

The earlier investigations had discovered that 46 of the 179 pensions which had been allowed had ceased by reason of the death or remarriage of the pensioners. The investigation of 1879 shows that the pensions of 30 others have also expired from the same causes; that 9 others ought never to have been granted, the pensioner having never been entitled; 56 others have never appeared before either of the commissions or agents who have been in the Territory since the return of Mr. Whiting, and it is presumed that few, if any of them, will ever come forward. It is recommended that payment be resumed in the remaining 38 cases.

Of the 370 pending claims investigated by Messrs. Vangueder and Shailer, 43 have already been approved for pension, and 160 will be disallowed; of the remaining 167 cases 24 are duplicates, and the information obtained by the agents indicates that not more than thirty or forty, at most, of the remaining cases will be further prosecuted.

Messrs. Vangueder and Shailer while in the Territory received declarations and evidence in new claims as follows: 13 invalids, 33 widows, 47 minor children, and 7 dependent relatives, 102 in all; 86 of them are approved for pension, 7 will be disallowed, and 9 remain undetermined.

It is a matter of satisfaction that at last some progress has been made towards the settlement of the vexing questions relating to the pensions on account of the service of the Indian Home Guards.

The following extracts from the report of Messrs. Vangueder and Shailer will be interesting as well as instructive in this connection:

\* \* \* We prepared declarations and reduced to writing testimony in 102 new cases. Seventy of that number were made on account of service in the First Indian Home Guard Regiment. This regiment was made up principally of Creeks, Seminoles, and Enchees. At the time the Indian pension claims were prepared by Wright, at Fort Gibson, the members of that regiment and the Indian families had returned to their former homes, from 50 to 125 miles distant from Gibson. This may account for the small number of claims prepared by said Wright for the heirs of deceased members of that regiment. The unusual high waters throughout the Indian Territory during the stay of Messrs. Foster and Webster at Fort Gibson made it impossible for the women and children to cross the several rivers between their homes and that place, and in consequence thereof but a few of the cases of that regiment were called up before those gentlemen.

The general publicity given to our presence in the Territory, and the desire manifested on the part of the Indians to obtain a final settlement of their pension claims, leads us to believe that the number of cases hereafter to be called up will not be large, and that in a large percentage of the cases now remaining without evidence sufficient to justify action thereon, the person named as claimant has no existence.

We deem it proper, in submitting this report, to state that in no case were any statements reduced to writing or declarations prepared for the Indians until we were entirely satisfied of their identity.

We made it a rule, as far as practicable, to refuse the testimony of soldiers other than members of the same company, and only varied therefrom when it was shown that the witnesses and the soldier in question, although serving in different companies, were by reason of their former relation more closely associated during service than others of the same company not members of the same band prior to enlistment. Unless otherwise shown in the testimony, all statements made before us may be accepted as having been made by persons having had personal knowledge of the facts to which they testified.

In the cases of widows, minors, &c., probably entitled to your favorable consideration, the death of the soldier did not only occur in the service, but with a few exceptions the record, although not always as definite as would be desired, shows that fact. Pneumonia and small-pox were the principal causes of death among the Indian soldiers. One thousand and seventy-five deaths are shown in the three regiments, and 75 per cent. are small-pox cases. The casualties from other causes are light, only 48 discharges on account of disabilities being shown by the record, notwithstanding the fact that a large number were wounded and afterwards unfit for duty, but were permitted to remain with the command, and kept on the rolls until the final disbandment of the regiments, probably because of the disturbed condition of their country.

The greatest difficulty encountered by us was that of fixing the ages of the children. A record of births is found now and then among the Cherokees; none among the Creeks or Seminoles. The Indians have little conception of time; particularly is this true of the females. The latter as a class we found utterly unreliable on questions involving calculation of time, and were, therefore, compelled to accept the statements of males. The "old men" were of the most value to us in arriving at ages, but yet their approximations would in most cases differ considerably from our own. The appearance before us of every child claimed for was deemed essential, and was insisted upon in all cases, unless it was shown that the child was sick and unable to travel. With exception of probably a half dozen every child claimed for was before us.



The minors will not burden the pension rolls after this year, they having now passed beyond the pensionable age, with probably one or two exceptions, and most of them reached the age of sixteen years long since.

Of invalids there are comparatively but few claims, and those mostly gun-shot wound cases.

Much of our time was occupied by persons desiring to make claim for pension. But when after an examination of the witnesses it appeared that they had no title under the law, we so informed them and declined to prepare declarations or reduce the testimony to writing. Of this class of cases probably 200 came before us, among them a large number of mothers, fathers, sisters, and brothers.

We procured all the evidence obtainable in a few of the dependent cases in which declarations had been prepared by our predecessors, Messrs. Seaton and Van Doren, and also in one or two prepared by us, and submit the same without comment, other than that the habits and customs of the Indians almost preclude the possibility of establishing the most essential point in a dependent case—that of actual or intended support of the parent on the part of the son.

Altogether, there are 167 of the Indian pensions now ready or nearly ready for payment, to wit: 21 invalids, 87 widows, and 59 minors.

In each case there is a considerable sum of accrued pension due, which, as the law now stands, must be paid by a check upon some one of the assistant treasurers or other government depository, and mailed to the pensioner in the Territory (see section 4765, Revised Statutes).

The fact that there are no banks or other financial institutions in the Territory upon which the pensioners can depend to exchange at a reasonable rate current money for their pension checks, added to the general unfamiliarity of the Indians with business transactions, exposes the Indian pensioners to the danger of being overreached and defrauded of a great share of their pensions by the unscrupulous speculators and adventurers who are known to infest the Indian and frontier settlements, unless some precaution shall be taken for their protection.

The great distance of these pensioners from the nearest agency for the payment of pensions renders it impracticable to require them to appear personally at the agency and receive their pensions as provided in section 4765, Revised Statutes, referred to. It is moreover questionable whether such considerable sums of money as are now due them ought to be placed all at once in the pensioners' hands. I am clearly of the opinion that it should not be done, and that not more than two hundred dollars of the accrued pension should be paid to any Indian pensioner at one time. I respectfully recommend, therefore, that a law be enacted authorizing the department to pay the accrued pensions to Indian pensioners in installments.

If the accrued pensions shall be paid in moderate installments, it is probable that the pensioners will be able to obtain the money for their pension checks of the merchants in the Territory at reasonable rates of exchange, and not be subjected to exorbitant and ruinous rates as they otherwise would be.

#### PENSIONERS RESIDING AT THE NATIONAL HOME FOR DISABLED VOLUNTEER SOLDIERS.

Upon an average there are about 2,450 pensioners who reside at the various branches of the National Home for Disabled Volunteer Soldiers, where they are maintained at the public expense. Their pensions amount annually to about \$300,000.

Considerations connected with discipline and proper government among the inmates have influenced the managers of the Home to request the payment of all the pensions to their treasurer, to be disbursed by him under their direction. This request was formerly acceded to in all

cases, but more lately the arrears under the acts of January 25 and March 3, 1879, and the accrued pensions due in newly-allowed cases, have been paid directly to the pensioners, paying to the treasurer of the Home only such portion of the pension as accrues while the pensioner continues to reside there.

The managers of the Home claim that under the clause of section 4825, Revised Statutes, authorizing them "to make by-laws, rules, and regulations, not inconsistent with law, for carrying on the business and government of the Home, and to affix penalties thereto," they may require a pensioner, as a condition of his admission to the Home, to assign to them his pension, notwithstanding the provisions of section 4745, declaring void any pledge, mortgage, sale, assignment, or transfer of any right, claim, or interest in any pension; the provisions of section 4747, declaring the pension not liable to attachment, levy, or seizure by or under any legal or equitable process whatever; the provisions of section 4766, declaring that "hereafter no pension shall be paid to any person other than the pensioner entitled thereto, nor otherwise than according to the provisions of this title; and no warrant, power of attorney, or other paper executed or purporting to be executed by any pensioner to any attorney, claim-agent, broker, or other person shall be recognized by any agent for the payment of pensions, nor shall any pension be paid thereon"; and the provisions of section 4765, requiring a voucher to be executed by the pensioner, &c., and further providing that the check shall be made payable to the pensioner's order and delivered to him. There is, in my opinion, no law providing for the payment to the officers of the Home of the pensions due the inmates, except on the condition expressed in section 4832 of the Revised Statutes, to wit, cases where the pensioner has neither wife, child, nor parent dependent upon him; and this difference of opinion has produced some friction between this office and the officers of the Home, which it is desirable to obviate.

So important a matter ought not to be left to depend upon the construction which may be given to these statutes by officers whose duties are so entirely independent of each other as are those of the Commissioner of Pensions and the Managers of the Home. The different readings which have been given these statutes have already caused some embarrassment to the service. I therefore respectfully recommend that the subject be brought to the attention of Congress, and that body be requested to define the powers and duties of the Commissioner of Pensions and the Managers of the Home in relation to the pensions of the inmates thereof.

#### INSANE AND IMPRISONED INVALID PENSIONERS.

In cases of insane invalid pensioners the pension can be paid only to a properly authorized guardian of the pensioner.

In many of these cases the expenses of guardianship are a heavy charge upon the dependent family, and in most, an entirely useless one. It is therefore recommended that the law be amended so as to provide that in cases of insane invalid pensioners having no guardian, but having a wife or children dependent upon him (the wife being a person of good character, and not having abandoned the pensioner nor his children) the Commissioner of Pensions be authorized, in his discretion, to cause the pension to be paid to the wife, upon her properly executed voucher, or, in case there is no wife, upon the voucher of the guardian of the children.

Similar provisions should be made in the cases of invalid pensioners who are imprisoned as punishment for offenses against the laws.

**REMARIED WIDOWS—COMMENCEMENT OF MINOR CHILDREN'S PENSIONS.**

There are many cases of widows who have been pensioned and remarry, but conceal the remarriage from the government and continue to draw their pensions, and after a longer or shorter period has elapsed the children of the soldier come forward and claim the pension from the date of the widow's remarriage.

The statute, if administered according to its literal terms (section 4702, Revised Statutes), would commence their pension from that date, notwithstanding they may have resided with and been supported by the mother meantime. The Department, in order to protect the government against the payment of the pension twice over the same period, has held that the pension paid to the widow in such cases after her remarriage may be deducted from the minors' pension.

This instruction of the department is unquestionably in accordance with the spirit of the law, but the language of the statutes does not clearly express this intent.

In my annual report for both 1877 and 1878 allusion was made to the subject; and, in order to avoid doubt and future questions, I respectfully renew the recommendations then made that the law be so amended as to provide, "that where the children have resided with and been supported by the widow of the soldier their pension shall commence at the date to which the widow was last paid."

**INCREASE OF INVALID PENSION, SECTION 4698½—REVIEW OF PREVIOUS RATINGS.**

The statutes relating to the subject of increasing invalid pensions on the ground of an increased degree of disability and regulating reviews of former ratings alleged to have been unjust are meager and indefinite; indeed, touching the latter point there is no statute whatever, and the proceedings in such cases rest entirely upon precedent, and as almost every case presents circumstances differing from former cases the consequence is a great want of uniformity of action.

The law relating to the increase is found in section 4698½, which provides that the increased rate shall not commence at an earlier date than the date of the medical examination. In view of the delays which now attend the settlement of claims it is manifestly unjust to require a claimant for an increase of pension to forego the increased rate which properly belongs to him until the office shall cause him to be examined by a surgeon.

I respectfully recommend, therefore, that section 4698½ be repealed and an act passed containing substantially the following provisions: That if any invalid pensioner shall think his pension is not commensurate with the degree of his disability, either because it has been improperly rated by the Commissioner of Pensions, or because the disability for which he was pensioned has increased, or because he has another disability incurred in the service, for which he is not pensioned, he may apply to the Commissioner of Pensions for an increase of his pension, and said application shall be considered and determined in the same manner as his original application, so far as such proceedings may be applicable to his case; and the Commissioner of Pensions shall cause any invalid pensioner to be examined by a surgeon as often as he shall deem it for the interest of the government or of the pensioner, and if, upon such examination, it shall appear that the pension enjoyed by the pensioner is not according to the degree of his disability, the same shall

be readjusted and rerated according to right and justice, provided that in cases where the increase is granted for the reason that the disability has increased since the pension was last rated by the Commissioner of Pensions, such increase shall commence at the date of filing application therefor; and provided further, that all applications for increase on the ground that the pension has been improperly rated, made more than one year after such alleged improper rate was fixed by the Commissioner of Pensions, shall be treated and settled as in the case of increase claims on the ground of an increase of disability.

#### ATTORNEYS AND ATTORNEYS' FEES.

Since the passage of the act of June 20, 1878, which limits the fee of agents and attorneys to ten dollars and repeals section 4785 of the Revised Statutes authorizing the Commissioner of Pensions to fix the amount of fee which an agent or attorney might receive in a pension claim (said section being a part of the title relating to pensions), there is grave doubt whether the penal provisions of section 5485, are applicable to the offense of contracting for, demanding, receiving or retaining an illegal fee.

This statute is one of great importance in protecting claimants from oppressive demands of their agents or others who become connected with the prosecution of the claim, and I therefore respectfully recommend that said section be amended so as to remove all doubt upon that point by striking out the words "in the title pertaining to pensions" where they occur in the fifth line of the section, and inserting in lieu thereof the words "by-law."

Instances are not unfrequent of agents and attorneys, who have been disbarred from practice by the order of the department, continuing to hold themselves out to claimants as competent and properly qualified persons to transact business before this bureau, and under such pretense receive fees, thus practically nullifying the order of disbarment.

One notable and very gross case of the kind has been brought to my notice, that of Gilmore & Co., of this city, who were lately disbarred. Since their disbarment, this firm, concealing the fact of their disbarment from their clients and holding out to them that they were still transacting their business, has collected fees in a considerable number of pension cases, and when the claimants were subsequently notified of the disbarment, they have complained of the imposition which had been practiced upon them.

Under the law as it now stands there appears to be no proper protection of the department against the disbarred attorneys, and no ample remedy for claimants who are thus imposed upon and defrauded of their money. I therefore respectfully recommend that a law be enacted making it a penal offense for any person who is disbarred from practice before the bureaus of the department to hold himself out to claimants or others as a competent and proper person to be intrusted with their business before the department or any of its bureaus or to collect or receive fees or compensation for any service rendered or to be rendered in matters pending in the department while the order of disbarment is in force.

#### CHANGE OF SYSTEM FOR PRESENTING EVIDENCE IN CLAIMS.

Your attention is again invited to the subject of a change in the method of presenting the evidence in claims and making the medical and surgical examination of invalid claimants and pensioners.

The necessity of substituting for the present secret *ex parte* method



a plan for taking the testimony in support of the claims before officers of the government by public proceedings in the neighborhood of the claimant and witnesses becomes more and more urgent as the number of claims, and the amount involved in each case, increases, both to secure an early and just settlement of meritorious claims and to protect the Treasury against fraud.

It is unnecessary to repeat the various considerations which have been urged in support of my former recommendations upon this subject, or to supplement them with the numerous additional suggestions to the same purpose which might be made, and I therefore dismiss the topic with a respectful and earnest recommendation that the attention of Congress be again called to the importance of early legislation of the nature above pointed out.

Table 6 classifying the unsettled Army claims according to the year in which they were filed, and the supplemental table classifying the invalid Army claims which have been allowed each year from 1871 to 1880, according to the year in which they were filed, illustrates the delays which pension claimants have experienced in the settlement of their claims.

#### CORRESPONDENCE.

The mail received has been greater than in any previous year, the letters and communications of all classes with the applications and evidence aggregate 891,513 separate pieces, and this number does not include many personal inquiries nor thousands of letters relating to the arrears claims. The written and personal inquiries of members of Congress number nearly 40,000.

The tone of much of the correspondence, as well as that during the succeeding months down to October last, was embittered by the delays the causes of which the claimants did not understand, or about which they were misinformed. Explanations were made in individual cases, but they reached comparatively few and did not inform the great mass of claimants of the circumstances which caused their embarrassment and on the 1st of October, I issued a circular letter setting forth the great accumulation of business and some of the more immediate causes of the delays which I caused to be mailed to the claimants generally throughout the country.

It is gratifying to be able to state that as soon as the claimants became informed of the facts the denunciatory and bitter tone of their inquiries almost entirely ceased.

#### SPECIAL INVESTIGATIONS.—FRAUDS.

Attention is invited to Table 9, showing the operations of the year under the provisions of Section 4744 Revised Statutes.

Out of an appropriation of \$40,000 to pay the expenses of the clerks detailed to make the investigations only \$26,466.19 was expended. The crowded condition of the office-work rendered it inexpedient to detail the usual number of clerks for this duty, and the same conditions continue to be operative.

During the last four years, the investigations have been very thorough and made with great care, and so conducted as to furnish the pensioners and claimants, whose cases were under investigation, as ample opportunity as possible under the system for presenting to the office all the facts, connected with their cases, which might tend to clear them from the suspicion which had attached.

The number of frauds discovered year after year, when it is considered that the attention of the office was attracted to them through accident, or some suspicious circumstance, or by the statement of a volunteer in-



former, is very great, and renders it certain that but a very small percentage of the frauds committed come to the knowledge of the office.

**PENSION AGENCIES.—PAYMENT OF PENSIONS.—COMPENSATION.**

It is with great satisfaction that I allude to the pay service.

The consolidation of the agencies for paying pensions under the order of the President, dated May 7, 1877, has worked a great reform in the service, not only in the direction of economy, but in the rapidity and promptness with which the quarterly payments are made.

At the last September payment, the agents paid in the first ten days (not counting the two Sundays which intervened) 184,903 pensioners, 23,527 in person at the agencies and 161,376 by mail. The former quarterly payments, under the consolidation, were made with great rapidity but this considerably exceeds any of the others in that respect.

The responsibilities of these officers are very great and the expenses of their offices necessarily large, and they justly complain that the salary, fees, and allowances are not sufficient to enable them to conduct their offices properly and have remaining to themselves, after the payment of the expenses, a fair compensation for their services and the responsibility imposed upon them.

I respectfully recommend that the law fixing their salary, fees, &c., be revised and their compensation increased by extending to them the right to use an official penalty envelope in their official correspondence.

The duties of the agents in making the arrears payments were very much more burdensome and expensive than was expected and estimated at the time of the passage of the act of March 3, 1879, making the appropriation for the payment of these pensions. That act fixed the fee for each payment at 30 cents, and appropriated the sum of \$15,000, or so much thereof as might be necessary, for its payment. The expense of these payments was little, if any, less than 50 cents in each case upon the average, to say nothing of the additional official responsibility, and I therefore recommend that the law be so amended as to allow them an additional fee of 20 cents for each payment, and that the sum of \$10,000 be appropriated for the payment of the same.

**CLERICAL FORCE.—SALARIES.**

The clerical force of the office is generally industrious and efficient, and the salaries paid to many of the clerks, as well as to the officers of the bureau, are small and less than should be paid for the duties which they are required to, and do perform, and in a considerable number of instances the salary received by clerks is inadequate to the comfortable maintenance of themselves and their families.

I respectfully submit the following recommendations:

1. That there be an increase in the number of clerkships of the classes 1, 2, 3, and 4.
2. That the chiefs of divisions and the appeal clerk, who are selected from among the clerks of class 4, be given an additional allowance of \$600 each per annum.
3. That the salary of the chief clerk be increased to \$2,500 per annum.
4. That the salary of the Deputy Commissioner of Pensions be increased to \$3,000 per annum.
5. That the salary of the Commissioner be increased to \$6,000.

Very respectfully,

J. A. BENTLEY,  
*Commissioner of Pensions.*

HON. CARL SCHURZ,  
*Secretary of the Interior.*

*Number of pensions allowed and increased during the year, with their annual value, together with the yearly value of all pensions on the roll, and the amount paid for pensions during the year.*

	Pensions allowed and increased during the year.						Dropped from the roll.		Reduction in rate.		Whole number of pensioners on the roll June 30, 1880.	Yearly value of pensions as shown by the roll June 30, 1880.	Total amount paid for pensions during the year ending June 30, 1880.
	Original.		Increase.		Restoration.								
	Num-ber.	Yearly value.	Num-ber.	Yearly value.	Num-ber.	Yearly value.	Num-ber.	Yearly value.					
Army { Invalids.....	9,865	\$890,608 18	3,917	\$419,099 00	1,146	\$57,265 00	2,849	\$355,030 00	149	\$8,085 68	133,212	\$13,486,061 22	\$20,524,830 48
Widows, &c.....	4,254	523,449 05	280	12,932 00	172	17,796 00	6,828	762,824 00	2,554	64,211 64	78,772	8,515,585 20	12,919,903 93
Invalids.....	311	27,062 20	74	4,810 00	21	1,365 00	116	11,232 00	—	—	2,000	247,232 18	352,101 18
Navy { Invalids.....	291	27,252 00	15	540 00	2	312 00	105	13,089 00	48	1,368 00	9,060	318,880 00	402,670 79
Widows, &c.....	284	27,264 00	—	—	84	3,264 00	1,801	177,806 00	—	—	10,138	873,248 00	780,710 38
War of 1812 { Survivors.....	4,030	444,480 00	—	—	2	192 00	1,076	103,296 00	—	—	24,750	2,878,000 00	2,658,058 14
Widows, &c.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Total .....	19,545	1,746,173 43	9,286	437,441 ■	1,877	80,194 ■	12,875	1,423,967 00	2,751	73,645 33	250,802	25,917,906 60	37,046,185 89

191 claims for bounty land and 29,667 claims for arrears of pensions were allowed during the year.

Total amount paid during the year for new pensioners, upon first payments, is to—

Army.....	\$7,230,050 69
Army.....	6,215,871 78
Navy.....	159,150 41
Navy widows, &c.....	135,201 62
War of 1812, survivors.....	54,816 70
War of 1812, widows of, &c.....	690,182 10
Total.....	12,468,191 20

\$148,679 paid for pensions during the year was paid to claim agents for their fees in claims which were filed prior to June 20, 1878 for arrears payments see Table 2.

## REPORT OF THE COMMISSIONER OF PATENTS.

DEPARTMENT OF THE INTERIOR,  
UNITED STATES PATENT OFFICE,  
Washington, D. C., December 1, 1880.

SIR: I have the honor to submit the following as a summary of the business of the Patent Office for the fiscal year ending June 30, 1880:

Number of applications for patents for inventions .....	20,990
Number of applications for patents for designs .....	681
Number of applications for reissues of patents .....	598
Number of applications for extensions .....	0
Number of caveats filed .....	2,680
Number of applications for registration of trade-marks .....	732
Number of applications for registration of labels .....	479
Number of disclaimers filed .....	11
Number of appeals on the merits .....	781
Number of inventions granted .....	12,584
Number of patents for designs granted .....	569
Number of reissues granted .....	496
Number of patents extended .....	0
Number of trade-marks registered .....	515
Number of labels registered .....	807
Number of patents withheld for non-payment of final fee .....	1,313
Number of patents expired .....	3,364

*Statement of moneys received.*

On behalf of applications for patents, caveats, disclaimers, appeals, and trade-marks .....	\$642,335 00
On behalf of applications for copies .....	55,135 44
On behalf of applications for assignments .....	22,341 35
On behalf of subscriptions to Official Gazette .....	8,635 33
On behalf of registration of labels .....	2,100 00
Total .....	730,547 12

*Statement of moneys expended.*

On behalf of salaries .....	\$406,958 99
On behalf of contingent expenses .....	34,997 80
On behalf of Gazette .....	27,292 17
On behalf of tracings .....	4,680 00
On behalf of copies of drawings (photolithographing back issues) .....	24,998 44
On behalf of photolithographing current issues .....	34,999 16
On behalf of scientific library .....	4,999 87
Total expenses .....	538,926 43
Receipts above expenses .....	\$191,620 69

The receipts for the past fiscal year exceed those of the preceding year \$27,400.33, while the expenditures were \$9,725.04 less, making a net gain in the excess of receipts over expenditures of \$37,125.37. The increase of receipts is due to the larger number of applications for patents, &c.

There have been about 235,000 patents for inventions, and 12,000 patents for designs, granted by this office since January, 1837. These patents are included in 145 classes of inventions, which are grouped according to their kindred character in 24 divisions, each division being under the jurisdiction of a principal examiner.

As applications are filed in this office they are jacketed or inclosed in a file wrapper, and then distributed to one of the principal examiners, according to the invention, for examination in the first instance.

The 20,990 applications for patents, 681 applications for designs, 598 applications for the reissue of patents, 732 applications for registration of trade-marks, and the 479 applications for the registration of labels, making in all 23,480 applications, make an average of about 1,000 original applications for each examiner to dispose of. To do this an examination of voluminous records, and of all patents in this and foreign countries belonging to the same class, must be made to ascertain whether the applicant is entitled to a monopoly of the invention for which he claims a patent.

After furnishing the applicant with information which, in the opinion of the examiner, should defeat the grant, said applicant may either amend his application or demand a reconsideration of the decision. As a rule the applications are amended, and, as they may be amended as often as new reasons and references are given by the examiner, which, by reason of the change in the claims, often becomes necessary, it is not extravagant to say that the average actions, each of which amounts to a decision upon evidence, which the examiner must himself find, is not less than four to each application. The fact that not less than 4,000 decisions, judicial in their character, must be made annually by each examiner, gives some conception of the labor imposed upon the examining force of this office.

Notwithstanding the examining force of this office is composed of persons of superior ability and industry, the work in some of the divisions is in arrears from two to four months. This is a cause of much complaint from inventors, who are, as a rule, impatient of delays.

I have attempted to remedy this evil as far as practicable, by drawing from the clerical force, itself quite limited, such of the best clerks as could possibly be spared, and assigning them to duty with the different examiners. There are now 27 clerks employed in this way doing duty in kind the same as third assistant examiners, and some of them are doing as much and of the same quality as third assistants. Because of the great need of increase of force and facilities in the examining corps I submitted estimates for some increase therein and for a sufficient number of clerks of class one to enable me to continue the assignment of at least one clerk of that grade to each examiner.

I have to say that the entire force in this office, so far as I have been able to ascertain, is industrious, and is deserving of commendation for fidelity and attention to duty. There are many persons on the rolls doing duty in a grade much above that for which they are receiving pay, the appropriation for salaries being entirely inadequate to the necessities of the office. My predecessor was compelled to employ a considerable number of persons beyond those provided for in the appropriation. In order to do this the salaries of a large number must be below that which is contemplated by Congress for a given character of service. I found the office in this condition and have refrained from making any change, for the reason that the entire number on the rolls is needed for the transaction of the business of the office. Indeed, the number is actually inadequate for the performance of all the work that should be done for the proper arrangement and protection of a vast amount of most valuable material in the office and to give the greatest practical convenience to the public. I have, however, suggested and provided for a remedy for this defect in my estimates for the fiscal year ending June, 1882, and have the honor to request that in furtherance thereof you will make such recommendation as shall, in your judgment, be deemed expedient and appropriate.

I desire to secure your earnest attention and consideration to the great

necessity for a system of digests of inventions for the use of this office and of the public. There should be arranged and classified and briefly described the inventions included in nearly 240,000 patents in this country, a large number of patents in foreign countries, as well as the inventions disclosed in publications, technical works, and the reports of scientific and other societies. If correct and thorough digests of this character, from the organization of the office down to the present time, were in the hands of the examiners and the inventors and attorneys practicing before the office, the examining corps would bear some reduction, unless the number of applications should be largely increased, instead of requiring augmentation, as is now the case. In many of these classes a sufficient number of volumes could be sold to reimburse the government for the entire expense of publication. Such digests would therefore be economical, and secure far greater accuracy in the granting of patents.

Another matter to which I invite your attention is the necessity of additional room for the use of this office. The want of adequate room for the examining corps largely diminishes the effective force of the examining officers. Mr. Commissioner Paine, on this subject, in his annual report for the last fiscal year, said:

The rooms occupied by the examiners are utterly inadequate to the requirements of the public service. Many of them are too unhealthy to be fit for any use except the storage of material. Each of the examining divisions needs two well-lighted and well-ventilated rooms. But, in most cases, a single small room is the only accommodation afforded for the entire examining division, including the clerks, with all the desks, models, drawings, and books required for the performance of their work. It necessarily results that each examiner is disturbed by the consultations of the other examiners with inventors and attorneys.

The crowded condition of the rooms retards the transaction of business, and at the same time occasions much sickness as well as discomfort among the examiners and clerks. This entails serious loss upon the government and involves gross injustice to these officers. The government has already levied upon the inventors contributions nearly equal to the cost of the Patent Office building. In the original statute providing for its erection, which was enacted July 4, 1836, it was ordered that the cost should be "paid out of the patent fund in the Treasury not otherwise appropriated." This would seem to have indicated at the outset all the net revenues realized by the government from the Patent Office to the construction of the building.

In 1849 and 1850 specific appropriations of the patent fund were made for the construction of this edifice, amounting to \$260,000. In addition, the government has taken from inventors enough to make the aggregate net revenues from the Patent Office almost a million and a half of dollars; and yet this bureau is now restricted to a small part, which is also the worst part of the building, and the best portions are being occupied by the Land Office, the Indian Bureau, the Assistant Attorney-General, and the offices of the Secretary of the Interior. The Patent Office needs and ought to have exclusive possession of the entire building, excepting only those portions required for the use of the Secretary.

Seasonable legislation looking to that end is imperatively required, but meantime some temporary expedient must be devised to increase the room at the disposal of this bureau. I recommend as one of the expedients the adaptation of a part of the third story of the west and north wings of the Patent Office to the present use of this bureau, by the construction of temporary partitions which shall not in any way interfere with the plan adopted for the reconstruction of those wings, and that one or more elevators be constructed from the basement to the third story of the building.

The latter part of this recommendation has in some measure been consented to, and a room is now provided for the copying and assignment divisions, which is ready for occupancy with the exception of suitable and sufficient heating apparatus. When that is provided I will be enabled to bring the copying division into this building. This, however, does not provide for additional room for the examiners, so necessary to the proper dispatch of business; and I trust, the reasons being so urgent, you will at an early day bring to the attention of Congress the difficulties



under which the officers of this bureau labor, to the end that suitable rooms may be provided.

I am, sir, very respectfully, your obedient servant,

E. M. MARBLE,  
*Commissioner.*

Hon. CARL SCHURZ,  
*Secretary of the Interior.*

## REPORT OF THE SUPERINTENDENT OF CENSUS.

DEPARTMENT OF THE INTERIOR, CENSUS OFFICE,  
*Washington, D. C., December 1, 1880.*

SIR: I have the honor to present the annual report of the operations of this Bureau:

During the year closed, the Tenth Census of the United States has been taken.

Although the work is substantially complete, returns having been received from all but seven small districts,\* out of the total number of 31,265 enumeration districts formed for the purpose of the census, it will probably be two or three weeks yet before this Office will be able to present the complete statistics of the population of the country; and it seems best, therefore, to postpone to a future report all mention of the results of the enumeration, and also all discussion of the methods in use, as well as any suggestions which may require to be made of changes in the census law with reference to future enumerations. I trust during the present month to be able to submit a full account of the working of the acts of March 3, 1879, and April 20, 1880, which were passed with reference to the recent enumeration, together with tables exhibiting the population of each State and county, distinguished as native or foreign, white or colored, male or female.

On the 1st of December, 1879, the force of this Office consisted of 44 persons, clerks and other employes. This force was occupied partly in making preparations for the approaching June enumeration of the population, and partly in conducting certain inquiries relating to the census year (the twelve months ending May 31, 1880,) then current, especially inquiries concerning the mortality of the different sections of the United States; concerning the fishing, mining, and grazing industries of the country; and concerning the social conditions of our city populations.

The following table exhibits the total number of employes of the Office on the 1st of each month succeeding, including May:

	Number of employes.	Amount of pay- roll for pre- ceding month.
January 1, 1880 .....	48	\$3, 219 54
February 1, 1880 .....	58	4, 097 50
March 1, 1880 .....	77	4, 589 87
April 1, 1880 .....	86	5, 479 32
May 1, 1880 .....	121	6, 250 58

\* Of these, one is in Texas, one in Wisconsin, one in Michigan, two in Maryland, one in Iowa, and one in Dakota.

The approach of the June enumeration required a considerable increase of the force of the Office, and as soon as the first schedules were received, in July, from the supervisors of the several districts, the force was rapidly increased to secure the earliest possible revision of the schedules, prompt payment of the enumerators for their services, and an immediate commencement of the work of compilation in the several divisions of the Office. The following table exhibits the aggregate number of employés on the 1st of each month from June to December, inclusive:

	Number of employés.	Amount of payroll for preceding month.
June 1, 1880.....	245	\$11, 069 25
July 1, 1880.....	263	14, 512 55
August 1, 1880.....	448	21, 880 56
September 1, 1880.....	787	35, 992 71
October 1, 1880.....	873	45, 411 93
November 1, 1880.....	1, 015	54, 564 28
December 1, 1880.....	1, 084	60, 256 03

The exigencies of the service ever since the 1st of May have required a considerable clerical force to be maintained upon work at night.

It is the view of the Superintendent that the compilation and publication of the several classes of statistics, should be pushed forward with the utmost expedition.

While the census will always remain of value for purposes of comparison with preceding periods, the first and greatest use of the census is its immediate use, not only for determining the distribution of political power, according to the provisions of the Constitution, but also for directing State and National legislation, and for guiding individual and social effort for the promotion of public interests, and for the amelioration of the condition of the criminal, afflicted, and dependent classes.

Every year and every month, therefore, which can be saved in the compilation and publication of the census statistics, adds appreciably to their value. I will not say that the country could well afford to pay largely for thus hastening the promulgation of the results of the census, but, rather, that the country could on no account afford to allow any delay therein beyond the time absolutely necessary to secure careful revision and a correct compilation of those results. In fact, however, when the saving of the general expenses of the Office is taken into account, a prompt compilation and an early publication of the census statistics secure an actual economy of expenditure. In this view, the work of this Office will be pressed forward with the utmost energy, until it is brought to a full completion. And, in order to attain the earliest practicable publication of results, I have the honor to recommend that Congress be asked to authorize the printing, by special contract, under the supervision of the honorable Secretary of the Interior (and if it be thought desirable, also, of the Printing Committees of the two Houses of Congress), of the several reports of the census, as fast as prepared.

With the enormous pressure upon the Public Printer, where every government service is clamoring for early action upon its own work, and where requisitions of weeks' if not of months' standing, must have priority to the census reports, a great saving of time could undoubtedly be effected by the adoption of the foregoing recommendation.

Several important reports will be ready for publication during the course of this winter, and I cannot but think that it would afford much

gratification to the country if they could be pushed through the press with all the expedition which belongs to private enterprise, when time is made of the essence of the contract, as in this case it should be.

In addition to the several special investigations set on foot during the year 1879, as mentioned in the last annual report of this Office, the following important departments have also been assigned to Special Agents for investigation, under the provisions of the eighteenth section of the act of March 3, 1879, and the eighth section of the act of April 20, 1880.

Robt. P. Porter, Esq., Statistics of Wealth, Debt, and Taxation.

Dr. Henry Randall Waite, Statistics of Churches, Schools, and Libraries.

Maj. Jno. W. Powell, Social and Industrial Statistics of the Indian Tribes.

Ivan Petroff, Esq., Population, Industry, and Resources of Alaska.

S. N. D. North, Statistics of Newspapers and Periodicals, and of the Book-Publishing Interest.

Col. J. B. Killebrew, Statistics of the Tobacco Culture.

Wm. L. Rowland, Esq., The Chemical Manufacturing Industries.

Henry Hall, Esq., Ship-building.

Prof. S. F. Peckham, Statistics of Petroleum Production.

George W. Hawes, Ph. D., Statistics of the Quarrying Industry.

Col. Carroll D. Wright, The Factory System.

With the exception of the last four investigations, which have but recently been set on foot, the work has in each progressed so far as to give assurance of a very marked degree of success to result from the use of the appropriate agencies authorized by the enlightened provisions of the sections referred to.

The authority conferred by the eighteenth section for the appointment of special agents to collect the Manufacturing Statistics of cities and considerable towns has been made use of by this Office to the extent of appointing such agents in 276 cities and towns, the total number of agents appointed being 365. From 260 of these cities and towns full returns have been already received, and an examination of the schedules shows that the value of the manufacturing statistics of the present census has been vastly enhanced by the system thus adopted.

In the remaining sixteen, embracing the largest cities of the country, from which returns, on account of the great number of establishments to be canvassed, are not yet fully due, the work is, according to full and frequent advices received at this Office, progressing in the most satisfactory manner. All the returns within this department of the census will, it is believed, be in possession of this Office during the present month, when the compilation of the manufacturing statistics will be pushed rapidly forward.

The work of paying the enumerators for their services has been carried on with the utmost expedition which was consistent with justice to the Census and to the Treasury.

It has been necessary to ascertain that each part of the enumerator's work has been properly done before he could safely be paid, and it has also been necessary to guard each statement and payment of account with all the checks which would have been necessary in case of much larger payments. The accounts of 28,410 enumerators have already been stated and settled, involving a total expenditure of \$1,820,027.34; of the remaining 2,855 cases, the accounts of 1,242 have been stated, and vouchers have been mailed to the enumerators for their signature. In 1,199 cases the accounts are now in course of adjustment. In 414 cases accounts have been suspended, owing to deficiencies or irregularities in returns

or to the failure of supervisors to make the required statements of time occupied or work done, or to the necessity of still further investigating matters connected with the enumeration. I have no reason to doubt that the present month will see all the enumerators paid for their services, except only in cases where a suspension is required, for reasons which are unmistakably connected with some fault, more or less serious, on the part of the enumerator himself.

The total disbursements on account of the Tenth Census to December 1, 1880, are as follows:

Supervisors of census:

Salaries.....	\$53,000 00	
Clerk hire and miscellaneous .....	54,801 12	
		\$107,801 12
Enumerators.....		1,820,027 34

Special agents for the collection of the manufacturing statistics of individual cities:

Salaries.....	\$39,607 93	
Office rent and miscellaneous .....	3,825 66	
		43,433 59

Special agents at large for the collection of industrial and social statistics:

Salaries.....	82,435 82	
Clerk hire .....	48,777 40	
Traveling expenses.....	55,733 01	
Office rent and miscellaneous .....	16,903 66	
		203,849 89

Census Office:

Salaries.....	288,708 84	
Rent and fuel .....	5,769 55	
Furniture and fittings .....	25,942 09	
Stationery .....	24,464 12	
Printing and binding.....	63,310 33	
Traveling expenses and miscellaneous.....	8,750 42	
		416,945 35

Total ..... 2,592,057 29

An acknowledgment of the services of the Supervisors of the several districts will more appropriately form a part of the report soon to be made upon the results of the census and the actual workings of the census law, as tested in the recent enumeration.

But I cannot deny myself the pleasure of anticipating that occasion so far as to say that the very difficult and critical duties of that office have been discharged, with but inconsiderable exceptions, in a manner most satisfactory. The zeal, energy, and prudence displayed by these officers, their provision against the accidents of enumeration, and their intelligent comprehension of the wants of their districts, entitle them to the highest commendation.

In but three cases has it been found necessary to use the authority conferred by the twenty-third section of the act of March 3, 1879, for the removal of supervisors and the appointment of their successors, and in neither of these cases were the causes requiring removal such as to reflect upon the personal or official integrity of the supervisor so removed.

I have the honor to be, very respectfully, your obedient servant,  
 FRANCIS A. WALKER,  
*Superintendent of Census.*

HON. CARL SCHURZ,  
*Secretary of the Interior.*

## REPORT OF THE UNITED STATES INSPECTOR OF GAS AND METERS.

OFFICE UNITED STATES INSPECTOR OF GAS AND METERS,  
No. 403 TENTH STREET,  
Washington, D. C., September 15, 1880.

SIR: I have the honor herewith to submit the annual report of this office, showing its operations for the fiscal year ending June 30, 1880. At its commencement will be found condensed tables giving the illuminating power and purity of the gas furnished by the gas companies during the year. Full monthly statements will be found in tables A and B. In the remaining tables, lettered C, D, E, and F, the monthly inspection of meters, the pressure of the gas, and the receipts and expenditures are fully stated.

Very respectfully, your obedient servant,  
S. CALVERT FORD,  
*Inspector of Gas and Meters.*

Hon. C. SCHURZ,  
*Secretary of the Interior.*

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## ILLUMINATING POWER AND PURITY.

The illuminating power and purity of the gas supplied by the Washington Gas-Light Company from July 1, 1879, to June 30, 1880:

Average illuminating power during the year, 16.88 candles.

Highest illuminating power during the year, 19.46 candles.

Lowest illuminating power during the year, 12.39 candles.

Average quantity of ammonia in 100 cubic feet during the year, 1.43 grains.

Highest quantity of ammonia in 100 cubic feet during the year, 5.01 grains.

Lowest quantity of ammonia in 100 cubic feet during the year, .20 grain.

Average quantity of sulphur in 100 cubic feet during the year, 10.76 grains.

Highest quantity of sulphur in 100 cubic feet during the year, 26.03 grains.

Lowest quantity of sulphur in 100 cubic feet during the year, 4.11 grains.

On various occasions during last fall the light obtained from the gas was dull and poor-looking, particularly in low sections of the city.

According to the instruments used for determining the illuminating power and pressure of the gas in this office the cause of these depressions was not owing in very many instances to a poor quality of gas, but was to a considerable extent produced by deficient pressure and the presence of naphthaline in the service pipes. The latter is a great nuisance, and baffles the skill and ingenuity of the most competent gas engineers to prevent its formation.

Naphthaline is a hydrocarbon which condenses from the gas in its passage through the mains; crystallizing, it chokes up the services, and in some localities prevents entirely the flow of gas. The cause for deficient light and low pressure in a number of instances can be attributed to the existence of this compound in the gas.

On seventeen occasions during the year the gas supplied by this com-



pany was of less illuminating power than sixteen candles, as follows: July 15, 15.53 candles; July 16, 12.39 candles; September 4, 15.82 candles; September 6, 15.75 candles; September 12, 15.01 candles; September 17, 15.85 candles; October 10, 15.30 candles; October 11, 15.88 candles; October 15, 15.57 candles; November 10, 15.86 candles; November 11, 15.95 candles; November 13, 15.86 candles; November 17, 15.78 candles; November 18, 15.76 candles; November 26, 15.59 candles; December 5, 15.81 candles; January 7, 15.97 candles.

It will be observed that on one occasion the gas was below fifteen candles. The depression was caused by the admission of air in the crown of a gasometer whilst being repaired.

On six occasions the gas of this company contained a slight excess of sulphur over the 20 grains allowed in each 100 cubic feet: September 30, 21.09 grains; October 1, 20.27 grains; October 7, 20.16 grains; October 8, 26.03 grains; October 9, 20.82 grains; January 19, 21.09 grains.

The illuminating power and purity of the gas supplied by the Georgetown Gas-Light Company from July 1, 1879, to June 30, 1880:

Average illuminating power during the year, 16.84 candles.

Highest illuminating power during the year, 19.29 candles.

Lowest illuminating power during the year, 13.89 candles.

Average quantity of ammonia during the year in 100 cubic feet, 1.99 grains.

Highest quantity of ammonia during the year in 100 cubic feet, 12.85 grains.

Lowest quantity of ammonia during the year in 100 cubic feet, .27 grain.

Average quantity of sulphur during the year in 100 cubic feet, 10.78 grains.

Highest quantity of sulphur during the year in 100 cubic feet, 17.67 grains.

Lowest quantity of sulphur during the year in 100 cubic feet, 1.37 grains.

On twenty-five occasions during the year the gas supplied by this company was of less illuminating power than sixteen candles, as follows: July 9, 15.94 candles; July 14, 15.58 candles; August 22, 15.06 candles; September 1, 15.12 candles; September 8, 15.80 candles; September 11, 15.94 candles; October 6, 15.27 candles; October 9, 15.42 candles; October 31, 15.79 candles; November 6, 15.96 candles; November 8, 15.55 candles; November 10, 13.61 candles; November 11, 15.78 candles; November 13, 15.36 candles; December 24, 13.89 candles; December 27, 15.81 candles; January 31, 15.95 candles; February 5, 14.69 candles; March 27, 15.95 candles; March 30, 14.56 candles; May 19, 15.50 candles; May 27, 15.52 candles; June 11, 15.82 candles; June 12, 15.72 candles; June 14, 15.75 candles. On three evenings, namely, December 24, February 5, and March 30, the power was less than fifteen candles.

From June 27 to August 9, inclusive, the gas supplied by this company contained a larger per cent. of ammonia than allowed, the excess being from two to seven grains each day over the lawful quantity, five grains in each one hundred cubic feet. This excess of ammonia could not have been prevented by ordinary care and prudence, but was occasioned by some unavoidable cause.

#### GAS-BURNERS

The burner required by law to be used in determining the illuminating power of the gas in this District is generally known as the Sugg-

Letheby, or Old Parliamentary, Argand burner, having fifteen holes and a seven inch chimney, consuming five cubic feet per hour, and the luminosity derived from this stated consumption must equal in intensity the light emitted by sixteen sperm candles, each burning at the rate of 120 grains per hour.

During the months of January, February, and March, last, a series of tests were made with burners ordinarily used in general illumination. The object in view, in making the experiments, was to ascertain whether the burners used by consumers furnished the same luminosity for equal consumption of gas as the standard Argand, described above. Tests were made also with London Argands, manufactured by William Sugg, of Westminster, and the Silber burner, made by Silber Light Company, London.

Description of burner.	Number of tests.	Pressure at point of ignition.	Actual consumption of gas per hour.	Illuminating power in candles, at rate of actual consumption.	Illuminating power in candles, at rate of 5 cubic feet per hour.	Value of 1 foot in candles.
		Inch.	Cub. feet.	Candles.	Candles.	Candles.
Brass burner, fish-tail, 3-foot.....	1*	.60	2.31	4.79	10.35	2.67
	2*	.60	2.95	7.99	13.54	2.79
	3*	.60	4.05	13.17	16.25	3.25
	4†	.60	2.85	8.08	14.17	2.83
	5†	.60	3.30	11.64	17.69	3.52
	6†	.60	2.51	12.45	17.70	3.54
	7†	.60	2.93	14.59	18.55	3.71
	8*	.05	5	17.17	17.17	3.43
	9‡	.255	5	20.77	20.77	4.15
	10	.50	5	20.32	20.32	4.06
	11:	.05	5	17.63	17.63	3.52
	12	.60	5	18.87	18.87	3.77
	13§	.255	5	21.54	21.54	4.30
	14	.40	4.12	16.52	20.00	4.00
	15§	.225	5	20.42	20.42	4.04
	16:	.05	5	17.70	17.70	3.54
	17§	.05	5	20.51	20.51	4.10
	18§	.225	5	21.02	21.02	4.30
	19:	.05	5	17.56	17.56	3.51

\* Poor and extravagant.

† Best where small flame is required.

‡ Standard Argand.

§ Excellent where a soft and steady light is needed. Very economical.

|| Good and economical for general use.

The foregoing tests very clearly demonstrate the great loss of light, and consequent waste, in consumption of gas, where burners with small openings are used, particularly where the tips are of metal and of the fish-tail form. Burners of this description, consuming from two to four cubic feet per hour, are very generally in use, with and without globes, and it is not at all surprising that complaints should be made of poor light where such conditions exist. Twenty to forty per cent. of luminosity is not an uncommon loss, and in cases where globes or shades are used an additional loss of twenty-five to forty per cent. in light is the result.

On the other hand, lava-tip burners, with large openings, either batwing or fish-tail form, gave an illuminating power of seven to fifteen per cent. greater than the power obtained with the standard (Sugg Letheby), and nearly equaled the light furnished by the improved London Argands. Flat-flame burners of this description are in every respect suitable and economical for all purposes of general illumination.

The great improvement in the construction of Argand burners is well

proven by the results of tests with Sugg's London Argands and the Silber burners, they yielding twenty per cent. more light than the present standard, and for reading, drawing, or writing, in fact for any purpose where a soft and steady light is needed, similar to that obtained with Moderator oil-lamp, these burners will be found most excellent, and all that could be desired.

#### INSPECTION OF METERS.

One thousand three hundred and nine meters were inspected and proved by this office during the fiscal year ending June 30, 1880, for the Washington and Georgetown Gas-Light Companies and for consumers of gas. Of this number 36 registered fast against the consumer; average error, 5.41 per cent. Eighty-nine registered slow against the companies; average error, 9.87 per cent. One thousand one hundred and sixty-seven registered within the limits required by law, namely, 2 per cent. either way, and were sealed and returned to the companies for service; 17 did not register the gas flowing through them.

One hundred and eighty-three of the above-mentioned meters were tested on complaint, as follows: Fifty-four were complained of by consumers of gas—23 registered fast, average error 4.59 per cent.; 5 registered slow, average error 5.74 per cent., and 26 registered within the limits allowed by law. One hundred and twenty-nine were complained of by the gas companies—6 registered fast, average error 7.10 per cent.; 77 registered slow, average error 16.77 per cent.; 29 registered within the limits allowed, and 17 did not register. This is caused by the diaphragms or partitions, which are made of leather, having perforations in them, which allows gas to flow through the meters without working the gearing which is connected with the index; consequently no registration takes place.

\* \* \* \* \*

I would further recommend that the law be modified so as to require, when for any purpose whatever the heads of meters that have been inspected, proved, and sealed are removed by the gas companies, meters of this description should be classed as repaired meters, and brought to this office for reinspection before again being placed in service.

The seal of the inspector is the evidence that the meter has been properly tested and proven, as required by law. To admit the right of the companies to remove the head of a sealed meter and rectify whatever is wrong and return meter to service without reinspection and sealing would be to render the law practically inoperative.

S. CALVERT FORD,  
*Inspector of Gas and Meters.*

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## REPORT OF THE ARCHITECT OF THE UNITED STATES CAPITOL.

ARCHITECT'S OFFICE, UNITED STATES CAPITOL,  
*Washington, D. C., October 1, 1880.*

SIR: As relates to the public works in charge of the Architect of the Capitol, I have the honor to submit the following report, showing the progress made since the date of the last annual report from this office, together with a statement of the expenditures for the same, made during the fiscal year ending June 30, 1880.

## CAPITOL.

The improvements to the Hall of Representatives, which were ordered by the commission, of which the Hon. Abraham Hewitt is chairman, have been completed. These consist mainly in connecting the rooms at the south of the Hall with the lobby, by which a large retiring room for members was made; constructing air-duct and shaft, opening some distance from the building on the west front, so as to prevent the introduction of air into the Hall charged with coal-gas from chimneys, and other impurities from the building, as has been the case formerly; and by greatly increasing the openings in the floor of the Hall, for the admission of fresh air.

These changes have added largely to the comfort of the occupants of the Hall, and have afforded an ample supply of pure air for respiration. Fireplaces have also been placed in the Hall. These changes and improvements seem to have given general satisfaction. The whole of the interior of the center building has been painted, and much done to the Dome. The rooms vacated by the Court of Claims have been renovated, repaired and painted, and are now used by committees of both houses. Many committee-rooms and corridors have likewise been painted.

The heating apparatus of the Senate has been put in order, and in some cases new radiators supplied; the openings in the floor of the Senate Chamber are being enlarged for the better supply of air, and many iron panels taken from the ceiling of the Chamber, which are to be supplied with lights of ground glass.

Four small sky-lights have been placed on the north side of the roof, by which the light in the Senate Chamber will be improved and equalized.

But little progress has been made on the frescoes of the belt in the Dome, owing to the illness and death of the late Constantino Brumidi.

Philipo Costagini, an artist of acknowledged merit, educated in the same school as the former artist, is now engaged on these frescoes, and shows by his work that he is a master in the art.

Tin cases for the iron shelving of the file-room of the House of Representatives have been provided.

I recommend that similar shelving and cases be furnished for the Senate files—the present being of wood, and liable to destruction by fire.

Congress, at the last session, passed an act appropriating seven thousand dollars for a passenger elevator for the south wing of the Capitol, to be located by the Speaker and the Architect of the Capitol, with a proviso, that “the location of such elevator shall not in any wise interfere with the use or occupation of, or communication between, any of the offices or committee-rooms of the House, nor with lighting or ventilation thereof, or of any corridor.”

These conditions, the Speaker and the Architect consider, amount to a prohibition, as it is not possible to place an elevator in the building that will not in “any wise” interfere with the light and ventilation.

In consequence, nothing has yet been done in the way of putting in the proposed elevator.

It is hoped that Congress will at its next session so change the law as to remove the restriction referred to, that the money provided for this purpose may yet be available during the present fiscal year for the purpose named in the law. That an elevator is not only desirable but necessary, is obvious.

Mr. I. H. Rogers, electrician of the House of Representatives, reports that the electrical department in his charge is in good order, and that by changes which have been made in the dynamo-electrical machines, the

gas, when turned on, can now be ignited much more rapidly than heretofore.

By this device, from five to nine squares can be lighted at a time, instead of one square, as hitherto.

Since the purchase of the dynamo-electrical machines the batteries have been dispensed with entirely, saving the government from \$1,000 to \$1,200 per annum, and at the same time have enabled us to experiment extensively with the different systems of electric lights.

These experiments were referred to in the bill which appropriated the money for the machines, and pursuant thereto, he has so far developed this light as to render it more steady than heretofore, and well adapted to lighting large areas, but he cannot recommend it for the legislative halls, on account of the flickering which still remains, but earnestly recommends it for the Capitol grounds and surrounding parks.

There were received at this office the following sums: from R. C. Hewitt, \$321 for old bricks from out-building at the Public Printing Office; from the New Jersey Iron and Steel Works, \$13.50 for hauling iron beams; and from various persons, \$97 for old doors, sash, and windows from the buildings torn down at Pennsylvania avenue and First street; amounting to \$431.50, which sum has been transmitted to the disbursing officer to be covered into the Treasury.

I again call attention to the necessity of making some provision for rendering the old Hall of Representatives and the rooms adjoining less liable to loss by fire.

#### CAPITOL GROUNDS.

The progress made in the improvement of these grounds will be seen by the following report of Mr. F. H. Cobb, engineer:

"I have the honor to report that progress toward the completion of the Capitol Grounds has been constant, but, owing to the limited appropriation, not so much has been done as in some former years.

"The improvements have always contemplated the erection of the grand stairways on the west front as part of the original design adopted by Congress, and all work has been done with reference to the removal of the two earthen terraces and the substitution of marble.

"For this reason no change has been made next the west front of the building further than to outline the lower platform connecting it with the walks leading from Pennsylvania and Maryland avenues. The approach from Pennsylvania avenue is complete, with the exception of the steps and part of the coping, both of which are now being put in place.

"Bronze standards for lamps are to be erected along this walk, furnished with electric light, but, as no method has proved entirely successful, the matter has been deferred until a more satisfactory result can be obtained.

"The piers at the entrances and salient points of the circles along West First street have been surmounted by elaborate bronze lanterns, lighted with gas. Single bronze standards have also been placed at the principal entrances on the north and south sides, and similar ones will be put at the remaining entrances during the present year.

"The stone boundary-walls in progress at the date of the last report have been finished, and the grounds are now inclosed with the exception of a part on the south and east sides.

"These are under contract and will be completed before next spring. Granite piers on the south side, at the carriage entrance from West First street, are also to be erected.

"In all, 2,017 square yards of artificial stone pavement have be



since the report for last year; 630 yards of this was mosaic work on Pennsylvania and Maryland avenue walks. A few defects have appeared, but they are repaired by the contractor as soon as possible. In general, this pavement fully justifies the high reputation that it has borne in the past, and constant travel for five years over a portion of it has failed to appreciably damage it.

"The asphalt pavements laid during the year 1877 are to be delivered up during the present summer by the contractors.

"The terms of their agreement required them to turn their work over to the government in perfect condition, at the expiration of three years, when their retained percentage would become due. Considerable repairing will be necessary for that situated immediately upon the east front of the building, and also that laid on the northeast and southeast corners. The remainder, laid on East Capitol street and the entrance from Pennsylvania avenue south is in good condition.

"The narrow strip of concrete on North B street, between North Capitol street and Delaware avenue, has been replaced with granite blocks similar to those on the remainder of this street.

"This was a much-needed improvement.

"As far as possible, the improvements have been distributed equally on the north and south sides.

"The air-shaft described in the last report has been completed. It has ample capacity for the needs of the House, and presents an ornamental appearance on the west grounds.

"The structure is substantially built of rock-faced blue gneiss and dressed granite, rising to a height of 20 feet above the surface. The whole is to be surmounted by an ornamental lattice roof. The duct leading to the fans is a half circle of brick, 10 feet in diameter, resting on stone abutments, with concrete floor.

"The location is so arranged as to present as little resistance as possible to the passage of air, and seems to perfectly answer the purpose of its construction.

"There has been much complaint from the want of a resting place for those who walk from the bottom of the hill to the building. To meet this want a structure is now being erected, designed to combine both drinking fountain and a secluded and cool retreat, while sufficiently public to prevent its being used for improper purposes."

Mr. Olmsted says :

The use of ordinary park-seats, either movable or fixed, will be better avoided in these grounds, for reasons of taste and propriety, as well as the disorder and misuse to which they would lead.

If it should be attempted to do without any resting place, however, the inconvenience that would result would probably lead to the adoption of some unsuitable expedients. Hence it has been thought better to introduce special arrangements, designed with all practicable precautions against abuse.

The summer-house in question will provide for persons passing through the northwest grounds a cool and shady place in which a few minutes rest can be taken without interruption to the walks or breaking the leading lines of view.

\* \* \* \* \*

To prevent any misuse, the doorways are provided with iron gates, which will be closed at night.

The policing of the grounds has prevented depredations in a large degree, and preserved good order; the members of the force should, however, be made special police of the Metropolitan department.

#### EXTENSION TO GOVERNMENT PRINTING-OFFICE BUILDING.

The extension of this building, provided for by the act approved March 3, 1879, has been completed.

Notwithstanding this large addition to the building the old portion is in some parts very much crowded and overloaded.

COURT-HOUSE.

The damage occasioned by the recent fire at the building has been repaired.

The defective gutters of the eastern wing have been taken out and new ones put in.

The entire roof has been repaired and painted, and all of the chimney tops which were much cracked and rapidly going to pieces have been rebuilt, newly capped, and painted.

The court rooms have been painted and otherwise improved.

The narrow escape which the upper and inflammable portion of the building made at the late fire adds force to my former recommendation of providing a more secure place for the land records of the District of Columbia.

\* \* \* \* \*

Very respectfully submitted.

EDWARD CLARK,  
*Architect United States Capitol.*

Hon. C. SCHURZ,  
*Secretary of the Interior.*

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REPORT ON THE RECONSTRUCTION OF THE PATENT  
OFFICE BUILDING.

DEPARTMENT OF THE INTERIOR,  
UNITED STATES PATENT OFFICE,  
*Washington, D. C., October 22, 1880.*

SIR: I have the honor to transmit herewith the report of Adolf Cluss, engineer and architect, in relation to the operations pertaining to the reconstruction of the Patent Office during the year ending October 1, 1880, for your information.

Very respectfully, your obedient servant,

E. M. MARBLE,  
*Chairman Board of Supervision.*

Hon. A. BELL,  
*Acting Secretary of the Interior.*

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OFFICE OF ENGINEER AND ARCHITECT,  
RECONSTRUCTION OF PATENT OFFICE BUILDING,  
*Washington, D. C., October 4, 1880.*

SIR: As requested by you, I herewith transmit a report of the operations pertaining to the reconstruction of the Patent Office Building, and have the honor to be,

Very respectfully, yours,

ADOLF CLUSS.

Hon. E. M. MARBLE,  
*Chairman Board of Supervision.*

OFFICE OF ENGINEER AND ARCHITECT,  
RECONSTRUCTION OF PATENT OFFICE BUILDING,  
*Washington, D. C., October 1, 1880.*

SIR: I have the honor to submit a report of operations pertaining to the reconstruction of the United States Patent Office Building from November 16, 1879, the date of my former report, to this date, with a recapitulation of the cost of the whole work which is now drawing to a close. The north wing is in readiness to receive the fire-proof model cases, for which appropriation was made last summer, but the west wing wants some finishing work.

In order to show the progress of the work during the period embraced in this report, the operations are below classed under a few general heads:

IRON-WORK.

The completion of the frame of the roofs, preparatory to the laying of the concrete arch blocks, was delayed late into the month of December by the difficulty of receiving comparatively few miscellaneous beams and bars from the rolling-mills. In all details under the immediate control of the contractors, the Phoenix Iron Company, of Trenton, N. J., commendable diligence was used. The window frames, casings, and architraves, the casings of the numerous circular light-wells, stairs, gallery floors, balconies, pilasters, and columns were all in place, so that the plastering could be commenced in March, with the opening of the season. The setting of the railings, most of which are circular work, could not be proceeded with before the slate floors of the galleries were laid. This caused a break in the work, and has kept the iron-workers busy in the building up to date.

In view of a rising market, all possible dispatch was used from the outstart to bring the bulk of the iron-work under contract. This has been achieved at favorable rates. Minor details, such as walks and railings around the outer and inner skylights, iron frames and sash between both skylights, iron ceilings over the north portico and western staircase, were attended to in the progress of the work and bought at market rates.

CUT STONE AND BRICK-WORK.

Only after the removal of the temporary roofs it was possible to have the cracked, broken, and in part calcined marble and granite jambs, lintels, and sills of the windows on fronts and yard repaired. This was promptly and economically done by substituting piece-work for days' work with the stonecutters.

The bricklayers have completed the cutting down of the inner faces of the walls, straight and plumb; they have built the pediments between the brick piers across the center naves which subdivide the continuous inner skylight into compartments. They have filled in and properly secured all exposed flanges or faces of iron beams or bars with fire-proof material in plastic state. The interstices between the wrought-iron columns supporting the galleries, and their cast-iron shells, have also been fire-proofed in similar manner. The whole areas of the roofs have been concreted upon the upper faces of the fire-proof roofing blocks with a thick surface coat of Portland cement, which by itself forms a water-tight roof, but is again protected by a copper roof. To do this work full justice, in the winter season, has been an expensive and most troublesome task. The bricklayers' and stone-cutters' work has been done by mechanics working directly for the government, under superintendence.

### HOLLOW FIRE-PROOF BLOCKS.

These blocks were used for the roofs in the shape of heavy arches, and for ceilings underneath the gallery floors in part in the shape of lighter arches and in part in the shape of bridge-tiles. Much difficulty was experienced in obtaining seasonably proper material under the contract entered into for this work, and considerable delay was incurred by the unavoidable rejection of improper material, but finally all difficulties were overcome.

### COPPER ROOFING.

The roofs and gutters were all laid by days' work, with tiuned copper, rivetted longitudinally and transversely, laid and securely fastened down in such dimensions and by such methods as have proved during the past hot summer to make ample provisions for expansion and contraction. When these roofs were laid the temperature of the atmosphere was mostly near freezing point.

### GLASS AND GLAZING.

The outer skylights have all been glazed with one-half inch thick, rough, hammered glass, laid on tarred rope and made tight with elastic cement; the inner skylights with one-quarter inch thick ribbed glass; the sash and frames between the two skylights with best double thick cylinder glass, and the windows on the main floor with polished plate glass.

The outer skylight is glazed with over 500 sheets of glass of 2 by 10 feet in size, and has been laid with all the precautions which the ample experience of the United States Treasury Department has matured. But to get such extensive areas perfectly tight takes continued vigilance, intelligent attention, and patience. No unusual defects have occurred; still some attention is yet necessary.

The glass was all bought under contract and laid or set by days' work.

### WOOD-WORK.

This branch is confined in this whole reconstruction to eighty-five mahogany sash of the windows on main floor, and to a few hand-rails of same material.

### IRON FURRING AND LATHING.

Wherever it was feasible all furrings of whatever kind were avoided. Iron furring and lathing was only used for casing the girders which span the openings between the brick piers transversely across and to both sides of the center nave. It was done by contract.

### PLASTERING.

The plastering was commenced with a strong force in the middle of March and completed by the 1st of July. All the plain work was done by the day; the ceilings were done with lime mortar and a sand finish preparatory to receiving frescoing. The side walls and piers were all plastered solidly with Keene's coarse cement, and prepared to receive oil color. This has proved excellent work, equal in hardness and finish to marble, but superior to marble in fire-proof qualities. The cornice-work was done by select mechanics, under strict supervision, and paid for as piece-work.

PAPERS ACCOMPANYING THE  
ORNAMENTAL (KEENE'S) CEMENT WORK.

The pilaster architecture, starting on the floor line of the first gallery to both sides of the center nave, consists of work done with Keene's superfine cement. The material for the shafts is mixed with the ingredients necessary to produce the style of Sienna marble, and has received a high polish; the capitals and superincumbent ornamentation are also done in same material, but finished flat. The nature of this work is such that it has been found most judicious to have a number of skilled mechanics associate themselves for the purpose, working in concert by the piece. By starting this work early in December last, it was got ready and put up at once, whenever the progress of the co-operating branches permitted it.

MARBLE TILING.

The center naves and passages connecting with staircase and adjoining wings are laid with marble tiling upon a bed of Portland cement. It consists of panels of octagonal white marble tile from the quarries of Brandon, Vt., with dots of black marble. These panels are bordered by friezes, consisting of red, variegated Champlain and of grey marble. This tiling was laid under a contract entered into, after due advertisement, with Messrs. Gannon & Flannery, of Washington; the tiling is all laid and being cleaned off at this date. The government has furnished the material, cement and sand, for laying the tile.

KEENE'S CEMENT FLOORS.

The space of the main floor underneath the galleries, which will be occupied by the model cases, is floored with Keene's coarse cement laid upon a base of Portland cement. It was laid by superior mechanics, working at piece-work, the government furnishing all the material.

SLATE FLOORS OF GALLERIES.

These floors cover an area exceeding an acre. The contract for material and work with the North Peach Bottom Slate Company, of Philadelphia, entered into on September 13, 1879, required the completion of the work in December, 1879. The contractors do not appear to have fully appreciated the difficulties of quarrying slabs of such large sizes as are required for our work, or otherwise singular ill-luck must have struck the leading slate quarries of Pennsylvania, which constitute the only available source of supply for this material, since, notwithstanding my persistent efforts, this work has been dragging along up to date when the last finishing touches are put on it.

DRAINAGE AND WATER SUPPLY.

Near the northeast and southeast ends of the west wing sewer connections and water supply were brought up so that at either place a part of a model case may be cut off and converted into a lavatory and water-closet.

In both wings 2-inch water pipe, with hose-cocks on main floor and both galleries, have been brought up on the yard walls from the basement floor. To make these conveniences and precautionary measures available, a sufficient water supply for the District must of course be calculated upon.



## PLAIN AND ORNAMENTAL PAINTING.

This work was commenced with a limited force working by the day, while the plastering was in progress, since Keene's cement work when painted requires one coat of priming within 24 hours after it has been laid on. Instead of the usual white lead, silicate white paint has been used throughout for the body of the paint. Without causing extra expense, its superiority has been conclusively established as a lasting and thorough preservative of iron and wood.

The plain and the ornamental painting has been carried on simultaneously; the north wing is substantially finished, but the completion of the work in the west wing will have to be delayed on account of the exhaustion of funds.

## MISCELLANEOUS.

Wherever it could be done to advantage, the skilled and unskilled labor required in the several branches was directly employed for the government under competent and careful foremen. Owing to the nature of the work and the circumstances under which it was done, the amount expended for miscellaneous labor, such as hoisting of material, removal of rubbish, scaffolding, regulating floors, &c., was of necessity heavy, but on the other hand no accidents whatever of any account have occurred to men or materials.

## CONTRACTS.

The contracts entered into and accepted proposals since the date of my last report are as follows:

Date of contract.	Description of work.	Name of contractor.	Rates.	Amounts, specific or estimated.
Apr. 21, 1880	Marble tiling .....	Gannon & Flannery..	.....	\$4,354 68
Nov. 3, 1879	Concrete manilla.....	A. D. Gordon, Philadelphia.	1½ cents per square yard.	651 50
Mar. 10, 1880	Plaster of Paris.....	J. G. & J. M. Waters..	\$1.35 per barrel .....	644 50
Mar. 3, 1880	Lime for plastering.....	W. H. Godey.....	85 cents per barrel.....	543 15
	Cattle hair.....	.....do .....	22 cents per pound.....	81 46
Feb. 15, 1880	Keene's coarse cement..	Howard Fleming, New York.	\$5.75 per barrel .....	3,009 55
Do .....	Keene's superfine cement.	.....do .....	\$9.50 per barrel .....	1,584 00
Do .....	White silicate paint....	.....do .....	10 cents per pound.....	843 22
Dec. 31, 1879	Iron furring and lathing of cornices.	Dwight & Hoyt, Springfield.	27 cents per square foot..	2,471 74
Oct. 3, 1879	81 bay wood window-sash.	Baldwin Bros.....	.....	587 25
Jan. 15, 1880	No. 1 giant sash-chain and fittings.	Smith & Egge Manufacturing Company, Bridgeport.	7½ cents per linear foot..	196 20
Feb. 1, 1880	Painters' material .....	G. Ryneal, jr .....	Price list.....	1,687 62
June 12, 1880	Double thick cylinder glass.	Semon Bache Co., New York.	.....	521 96
Mar. 15, 1880	½-inch thick fluted glass put in place.	E. A. Boyd, New York.	24½ cents per square foot.	2,010 35
Mar. 10, 1880	River sand for plastering.	A. Flynn.....	85 cents per cubic yard..	475 15
Do .....	River sand for concreting floors.	R. M. Miller .....	73 cents per cubic yard..	21 90
July 15, 1880	River sand for concreting floors.	J. B. Lord .....	90 cents per cubic yard..	99 00
June 10, 1880	White sand.....	R. M. Miller .....	12 cents per bushel .....	55 20
Jan. 3, 1880	Coarse sand for roof concrete.	W. L. Ross .....	80 cents per cubic yard..	149 60
Oct. 15, 1879	Saylor's Portland cement.	Copley Cement Company, and agent.	\$2.90 per barrel of 400 pounds.	2,053 20

## FINANCIAL STATEMENT.

The lowest estimate before Congress for the completion of the work of reconstruction was \$250,000.

The appropriation made by Congress under date of March 3, 1879, including *corrected* balance available under appropriation made June 20, 1878, foots up to \$244,920.48.

The endeavor to bring the total cost of the work down to the available amount was frustrated by the difficulties of obtaining material and work under contract at the stipulated times, which cause reacted most unfavorably on the cost of the work done by the day during last winter and spring and on contingent expenses. The return of prosperity to the business interests of the country, which increased materially the cost of various building materials, worked in the same direction.

The available appropriation has been spent as follows:

For erection of elevator and preparing for work .....	\$557 06
Repairing and dismantling temporary roofs and repairs to adjoining roofs .....	1,666 43
Holisting material, removing rubbish, scaffoldings, and miscellaneous labor .....	7,760 20
Brick-work and preparing main floor for concrete .....	16,766 70
Granite and marble cutting .....	4,383 23
For iron-work of roof and galleries .....	50,839 02
For miscellaneous iron-work, derrick-work, iron ceilings, roofs of porticos, and staircase, walks and railings around skylights, sash and frames between skylights, iron doors to roof, scuttle, ladder, &c. ....	\$18,087 67
For iron-work of interior finish .....	30,089 84
For hardware and labor on sliding doors .....	391 40
For iron ridge ventilator and casings of inner skylight .....	2,041 27
For fire-proof concrete blocks of roof and galleries .....	11,143 43
For concreting of roofs .....	3,059 20
For copper roofing .....	18,429 87
For drainage, gas, and water supply .....	1,217 10
For iron furring and lathing of girders .....	2,471 74
For plastering .....	14,723 01
For ornamental (Keene's) cement work .....	7,482 31
For glass and glazing of and between skylights .....	6,668 98
For window-sash, glass, glazing and hanging .....	2,877 82
For plain and ornamental painting .....	5,438 41
For marble tiles of main floor .....	4,966 48
For Keene's cement floors .....	3,428 36
For slate floors of galleries .....	14,508 80
For contingent services in office and on building .....	12,835 43
For traveling expenses, freights, printing, advertising, and stationery ...	1,841 02
For temporary office, tools, and furniture .....	1,275 03
<b>Total .....</b>	<b>244,920 48</b>

In order to enable the work to be finished up as thoroughly as it has been begun and prosecuted up to date, the following items ought to be provided for at as early a day as possible:

For overhauling and putting in best condition the skylights glazed during last winter .....	\$400
For furnishing and putting on hardware to the windows .....	200
For bay wood hand-rails, mostly circular, of gallery and railings .....	800
For plain and ornamental painting and marbleizing the west wing .....	1,250
For iron sills to form tight joints on top of slate slabs of both galleries, all around center naves, and miscellaneous finishing .....	2,200
For one additional coat of paint for roofs .....	300
For India-rubber plates on steps of 16 stories of gallery and stairs .....	500
For covering the leaky floors of the northern porticos (on level of main story) with asphalt .....	175
	<hr/>
	5,915

It is respectfully suggested that the importance of making immediate provision for the above items be brought to the attention of Congress,

so that the building can be turned over to the Interior Department in complete order.

It would be a neglect if attention would not be called again to the strange condition of the ceiling and roofs of the south wing of the Patent Office. The stately main portico is a mere tinder-box overhead. The wooden frame of the main roof, though saved from destruction by the fury of the fire through the exertions of the firemen, is charred to a considerable extent, and a spark may set it on fire. The leaky covering of the roof is in large sections temporarily patched up with tin. This is certainly a case which demands prompt attention. The risk is too disproportionate to the value and importance of the building with its valuable records.

I have the honor to be, very respectfully, your most obedient,

ADOLF CLUSS,

Engineer and Architect.

Hon. E. M. MARBLE,

Chairman Board of Supervision, Washington, D. C.

GOVERNMENT HOSPITAL FOR THE INSANE.

GOVERNMENT HOSPITAL FOR THE INSANE,

Near Washington, D. C., October 1, 1880.

SIR: In behalf of the Board of Visitors, we respectfully submit for your consideration the twenty-fifth annual report.

The following tables present a synopsis of the operations of the hospital, with the changes, for the year ending June 30, 1880.

Summary.

	Males.	Females.	Total.
Remaining June 30, 1879.....	617	202	819
Admitted during the year ending June 30, 1880.....	181	44	225
Whole number under treatment.....	798	246	1,044
Recovered.....	38	14	52
Improved.....	23	10	33
Unimproved.....	.....	3	3
Died.....	46	13	59
Total discharged and died.....	107	40	147
Remaining June 30, 1880.....	691	206	897

Admissions and discharges.

	Males.			Females.			Totals.	
REMAINING JUNE 30, 1879.								
Army.....	405 8	413		4 0	4		417	
{ White.....								
{ Colored ..								
Navy.....	40 0	40					40	
{ White.....								
{ Colored ..								
Civil life.....	124 40	164		145 53	198		362	
{ White.....								
{ Colored ..								
			617			202		819

*Admission and discharges—Continued.*

			Males.		Females.		Totals.	
ADMITTED DURING THE YEAR 1879-'80.								
Army .....	{	White ....	108	112			112	.
		Colored ..	4					
Navy .....	{	White ....	12	13			13	
		Colored ..	1					
Civil life .....	{	White ....	42	56	35	44	100	
		Colored ..	14		9			
				181		44	225	
UNDER TREATMENT DURING THE YEAR.								
Army .....	{	White ....	513	525	4	4	529	
		Colored ..	12		0			
Navy .....	{	White ....	52	53			53	
		Colored ..	1					
Civil life .....	{	White ....	166	220	180	242	462	
		Colored ..	54		62			
				798		246	1044	
DISCHARGED DURING THE YEAR— <i>Re-</i> <i>covered.</i>								
Army .....	{	White ....	16	17	1	1	18	
		Colored ..	1		0			
Navy.....	{	White ....	4	4			4	
		Colored ..	0					
Civil life .....	{	White ....	13	17	13	13	30	
		Colored ..	4		0			
				38		14	52	
DISCHARGED DURING THE YEAR— <i>Im-</i> <i>proved.</i>								
Army .....	{	White ....	14	14			14	
		Colored ..	0					
Navy.....	{	White ....	1	1			1	
		Colored ..	0					
Civil life .....	{	White ....	8	8	9	10	18	
		Colored ..	0		1			
				23		10	33	
DISCHARGED DURING THE YEAR— <i>Un-</i> <i>improved.</i>								
Army .....	{	White ....						
		Colored ..						
Navy .....	{	White ....						
		Colored ..						
Civil life .....	{	White ....			3	3		3
		Colored ..			0			

*Admissions and discharges—Continued.*

			Males.		Females.		Totals.	
DECEASED DURING THE YEAR.								
Army .....	{	White .....	30	30				30
		Colored ..	0					
Navy .....	{	White .....	5	5				5
		Colored ..	0					
Civil life .....	{	White .....	6	11	9	13		24
		Colored ..	5					
				46		13		
REMAINING JUNE 30, 1880.								
Army .....	{	White .....	453	464	3	3		467
		Colored ..	11					
Navy .....	{	White .....	42	43				43
		Colored ..	1					
Civil life .....	{	White .....	139	184	146	203		387
		Colored ..	45					
				691		206		897

NOTE.—There were four less persons than cases under treatment in the course of the year, by reason of four readmissions.

\* \* \* \* \*

As far as could be ascertained, the volunteers of the Army and Navy under treatment during the year ending June 30, 1880, entered the service from the following States:

	Army.	Navy.	Total.
New York .....	50	.....	50
Ohio .....	29	.....	29
Pennsylvania .....	22	.....	22
Indiana .....	24	.....	24
Michigan .....	11	.....	11
Illinois .....	17	.....	17
Wisconsin .....	13	.....	13
Missouri .....	4	.....	4
Connecticut .....	8	.....	8
New Hampshire .....	5	.....	5
Vermont .....	1	.....	1
Maryland .....	7	.....	7
Massachusetts .....	21	.....	21
New Jersey .....	6	.....	6
Maine .....	7	.....	7
Nebraska .....	2	.....	2
Delaware .....	1	.....	1
Minnesota .....	1	.....	1
Iowa .....	2	.....	2
North Carolina .....	1	.....	1
California .....	1	.....	1
New Mexico .....	1	.....	1
Kentucky .....	1	.....	1
West Virginia .....	2	.....	2
Unknown .....	7	1	8
Total .....	244	1	245

\* \* \* \* \*



The number of admissions during the year, 225, is above the usual rate, and the number remaining under treatment at the close of the year, 897, is considerably in excess of that at the close of any previous year. Congress at the last session limited the admission of the late soldiers and sailors to those classes which are named in the Revised Statutes of the United States as entitled to the benefit of the hospital. It is too soon to decide how much relief we shall experience from the change; but, judging from the results of the first three months since the law went into operation, the best that can be hoped is that henceforth the number of inmates will not greatly increase. Since the 1st of July, 1880, 51 patients have been admitted; 63 were received in the corresponding three months of the last year, and 62 in the three months of the year previous. This would indicate a falling off in the number of admissions for the present year of nearly fifty, as compared with the last two years, but during these years the number of persons remaining under treatment has risen from 793 on the 30th of June, 1878, to 897 on the 30th of June, 1880, which is a gain of 104 in two years; so that unless the number of discharges can be considerably increased, which, in view of the chronic character of so large a majority of the cases, can hardly be hoped for, our number, which is certainly enough, will remain about as at present.

The mortality for the year was 59, it being nearly seven per cent. of the average number under treatment, or five and six-tenths per cent. of the whole number treated. This is considerably below the usual average, and the more satisfactory that it shows our household has not suffered seriously in health from the overcrowding of the wards. The attempt to relieve the hospital by discharging to the care of friends such as, although not fully restored, were able to live at home with safety, has somewhat reduced the percentage of recoveries, it being a little more than thirty-five per cent. of the number of discharges, and only about five per cent. of the whole number under treatment.

The hospital is for the care of all cases as well as for the cure of the insane; what institutions of this class are doing in both of these directions is a matter of public interest. The act of Congress establishing a United States hospital for the "most humane care and enlightened curative treatment of the insane of the Army and Navy of the United States and of the District of Columbia," was approved March 3, 1855, and it seems proper that space should be taken in this the twenty-fifth annual report of the Board of Visitors to state briefly what has thus far been accomplished for the cure and what care is being rendered to these unfortunate wards of the nation.

The statistics of the hospital show that 4,940 or a little less than five thousand cases have been under treatment since the buildings were first opened for patients in January, 1855. Of these 1,094 have died and 2,095 recovered. The result approximately is that of every five persons admitted one will die, two recover, and two remain to be supported and cared for by the government. These figures are probably a little too favorable a showing; hospital statistics are at best only approximations to the truth, and subject to considerable correction for the elimination of cases that, apparently well here and discharged as such, needed only the removal of the restraints of hospital life to develop the insanity that was not cured but latent. To avoid this mistake some statisticians discard all readmissions, claiming that they could not have been recoveries in the first instance. This no doubt would be true in some but not in all cases; certainly insanity does not belong to the class of diseases that occur but once in a lifetime; exposure to the same ex-

citing causes is quite likely to bring on a fresh attack after a genuine recovery; clearly it would be absurd to claim that a man had never recovered from the ague because, residing in the same malarial district, he had the next year found it necessary to resort the second time to his quinine. Another difficulty in deciding upon the recovery in insanity is, that the normal standard of mind is one that varies with each individual, and for the expert to judge unerringly of this in all cases, it would be necessary for him to have known the person before his insanity commenced. To determine how far any mental impairment exists after the active manifestations of insanity have subsided is not an easy task; "the stream cannot rise above the fountain," and a condition that would be a normal mental activity with some men would be dementia in a Webster. One person's nerves seem to be hung as it were on wires and vibrate at every touch, the next person has apparently no nervous system. "Tis a mad world, my masters," and in one way or another we are all more or less ill-balanced. No superintendent of the insane, however conscientiously he may set himself to the task of revising his statistics, can wholly avoid error, especially if, as in this hospital, the majority of cases are lost sight of as soon as discharged. But, whatever may be the possibilities of cure in individual cases, or whatever the statistics may seem to show, those most conversant with the disease, in this country and in Europe, will probably agree in the conclusion that at the present time not more than one in three of those who become insane recover. While experience shows that if taken in time some forms of insanity are eminently curable, there are others that are hopeless from the start, a brain disease that to some extent seems an outgrowth of modern civilization and is certainly on the increase. Is there, then, any the less need for treatment because we know that two-thirds will not recover? None the less for treatment and the more for care; indeed, since the care of the insane in hospitals has undoubtedly increased the average length of life in the cases that do not recover, this class has so multiplied that to-day one of the most urgent questions in social economy and public charity is, what shall we do with our chronic insane?

The policy of this hospital has from the first been at once economic and liberal; to omit nothing deemed essential to the proper care and nothing that might aid in the cure of the insane, but to avoid all expenditure not deemed strictly necessary. The entire outlay for buildings and four hundred and twenty acres of land, up to this time, omitting ordinary repairs, has not exceeded one thousand dollars per capita on the present number of patients. These buildings are all substantial brick structures, most thoroughly built, neatly but plainly furnished, and conveniently arranged for the purposes for which they were designed. A majority of the inmates being soldiers, the Army ration has been made the basis of the diet table with such additions as are rendered possible by an extensive farm devoted to dairy, vegetables, and fruit. The result is an abundant quantity of plain food, nutritious in character, with such special diet as sickness or individual conditions may require. Our patients as a rule are not of a class to have extravagant tastes or to miss luxuries.

The treatment in the Government Hospital for the Insane is not stereotyped; the immediate supervision and care of the different divisions is in the hands of competent medical men all reporting to one chief officer, and the endeavor is to treat individual cases and not insanity in the concrete. If this man needs quiet and seclusion he has it; if the other will be better for a parole, the liberty is given; such an one is dangerous to himself or others, and is subjected to restraint; opium

not interdicted when it is no longer fashionable, nor does the latest hypnotic find favor because it will not do to be behind the times; in the interests of the insane we undertake to be old fashioned or any fashioned if "by any means we may save some." This or that course is not resorted to because it is the English method, or consonant with the American idea, but simply because it meets the individual case; we are not wedded to any system, nor do we claim to have any new light; are not specially gifted, only thankful for common sense; it is a practical working hospital, not an ideal one.

The site of this hospital was admirably chosen. Standing upon a broad plateau on a commanding height some two miles due south of the capital, it overlooks both the city of Washington and the Potomac River. While a hospital for the insane should be built apart from the town, that ought not to be hidden from view; there is less of the feeling of isolation when one looks upon the moving panorama of the boats upon the river, and there is society in the evening lights of the city beyond; it is the calm presence of the world outside without its distracting roar. The two hundred acres within the inclosing wall, which is their home, will in time become one of the most beautiful spots in the neighborhood of Washington. Nature has bountifully endowed it with variety of scenery in grove and ravine, hill-slope and river-side, while careful cultivation is every year adding something to its charms. No insane person is injured by natural beauty; greensward irritates no nerves however sensitive; those who pass by the flowers to-day may turn to them with delight to-morrow; so, it is well to widen our green lawns and brighten the walks with roses. In the line of the esthetic treatment of the insane, we hang the halls with pictures, send cut flowers to the tables and rooms, bring in music and singing birds, and nine out of ten care for none of these things; what is it to them that the sunshine is in the sky, so it shines not in their lives? Ah! but it is the individual case, the tenth one that we are content to benefit with all this; the nine suffer no harm from pleasant surroundings; surely we do not err in making their home more homelike.

So with labor as a part of the treatment of the insane; it is not a remedy of universal application; indeed, some may be injured by it, though, except in the acute forms of the disease, we think such cases are rare. As a rule, work when it is cheerfully engaged in, benefits the insane, partly as a diversion and partly as an outlet, as it were, to the mental excitement. If this hospital could be said to maintain any dogma in regard to the treatment of the insane, which, however, we deny, it would be that work and a certain decree of freedom are essential to the contented residence if not to the cure of the insane in hospitals. That the above will hold true in a majority of cases our experience convinces us, but to apply it to all would be absurd; some patients cannot be trusted with any liberty, elopement seems to be a manifestation of their disease, and their constant study is how to get away. Others seem to have no volition left, and the mind cannot be brought up to the level of an intelligent action; but the hoe and the pickaxe appeal to a class of minds low down in the scale of intellectual effort, and painstaking effort will accomplish much in the way of automatic labor. It will often be found, too, when your veteran eloper is set to work and his mind diverted with his occupation that he has ceased to run away; we prize what is hard to obtain, but when it is freely offered we question its value, and the insane man who can walk away any day is apt to wait till to-morrow. Very insane men do work with us, and are the better for the labor.

In their relation to the two-fold question of labor and limited freedom our detached buildings become prominent. The original plan of this

hospital involved detached buildings for certain classes. This was at first only made available as a separate provision for the colored insane, but as the numbers increased and it became necessary to make further accommodations, a distinct hospital building and inclosed grounds for the female patients was happily decided upon. Unfortunately the considerable outlay necessary for suitable buildings for a proper provision for the women has delayed their erection up to the present time. The matter will be brought before Congress at its next session and it is thought that there can be no reason for further delay; certainly nothing is more essential to the continued progress of the hospital in "the most enlightened curative treatment of the insane." Largely extended liberty could be given to both sexes, and facilities for classification would be doubled at once; it would change the character of the whole institution. Pending the erection of the hospital for the women it became necessary that immediate steps should be taken for the relief of our crowded wards, and detached buildings for distinct classes of the male patients were provided for by Congress and constructed of brick at a very moderate cost, not exceeding two hundred and fifty dollars per patient. These are plain, but thoroughly built houses, and as detached buildings for the classes for whom they are designed are very creditable. We shall be pleased to have them examined by those who are interested in such matters, and would recommend to Boards of State Charities and those having the control of our State hospitals for the insane to consider whether some such detached buildings for special classes, erected at a moderate cost within the grounds of their present hospitals and under their supervision and control, would not be a better provision for the surplus insane that now crowd their wards than to turn them over to the town and county almshouses.

The Atkins Hall provides on the barrack plan for 65 laborers, has a liberal diet adapted to their requirements, and is as open and free as any private house; the building is light, cheerful, and homelike, and the inmates as they smoke their pipes under the trees after the work of the day is over count themselves the aristocrats of the establishment; so labor has its rewards.

The Relief Building provides for about 200 patients—three distinct classes, arranged by floors, each admitting of two subdivisions and combining the barrack system with single rooms. These buildings are very cheerful and airy and are tastefully finished in Georgia pine. The first floor requires no guards in the windows; on the upper floors a light wire lattice is used as a protection against accident rather than with any design to confine the inmates. The third floor is set apart for those pursuing indoor occupations, their work-room being in the upper story, together with an amusement hall for their exclusive use in the hours of recreation. Here patients who for one reason or another are not suited for or disposed to out-door labor may find employment at broom-making, mat-braiding, and other occupations; a glass-cutter stands at his wheel, an artist works with his pencil, the idea being that all of these men shall have something to do, whether profitable or otherwise, the industry of the insane not being subject to the ordinary laws of trade. The lower floor of the building is occupied by a class who from one or other infirmity are not capable of labor but can be trusted to a certain extent and may be able to render some service about the grounds, of which it is proposed to inclose several acres, immediately surrounding their buildings and to give them full liberty there. Not to go farther into detail from what has been merely outlined, it will be seen how easy it is to extend this plan of detached buildings to the decided advantage of



tain classes of the insane. While the main building will remain the hospital proper, and by the removal of the female patients to their own hospital ample accommodations will be afforded for the different grades of acute cases and for the feeble and infirm who require more constant medical supervision and care, the detached buildings can be better adapted in their architectural arrangements to the wants of special classes than the uniform wards of a hospital can be; as, for example, a detached building for our future erection will be a small structure built like a private house with nothing of the air or furnishings of a hospital about it, where a few convalescents waiting till their health is fully established can step out of the hospital while still under its supervision.

From what has been said of the importance of labor it might perhaps be inferred that a large majority of our inmates were regularly employed; this is very far from the fact. While we believe in the importance of occupation to the insane man, and endeavor to make attractive the different industries at our command, still we cannot make labor compulsory, and the bulk of the insane are disposed to do nothing. Although the different shops and stables have afforded some opportunity for special work, till recently there has been a decided lack of opportunity for indoor occupation for the male inmates. When the work in the relief building, now just in its inception, is fully developed we shall look for a perceptible increase in the number employed. On the 30th of September, 1880, the record which is always kept here showed that 176 men and 46 women were at work, either indoors or out; this would be a little less than one-fourth of the whole number under treatment. It ought to be said that the day was chosen at random, merely as being the last day of the month, and that a number of patients, particularly women, were employed on work of their own of whom no record is made, the list being only of the regular working force of the hospital.

On the same day the record shows that 99 patients had their parole of the grounds; of course the number of female patients who can safely go unattended will be small until they are established in their own department and grounds; the probability is that then twenty-five per cent. of both sexes can with safety have the liberty that less than twelve per cent. now enjoy; at present only one of our female wards has its doors standing open by day, with the distinct and separate provision to which they are entitled there might be three. To those who will soon be well and go out from your wards it may not so much matter about the parole, only it is always a mistake to overlook the manhood in a man; but for those chronic cases that can be trusted, who will know no other home than yours, it is a cruel mistake not to take away the prison bars. It is too late in the history of the treatment of the insane to say that you have done all you can for an insane man when you have locked him up; sometimes the best curative treatment you can give him is to open his door, not indiscriminately, each individual case must be determined for itself, remembering that you alone are responsible, that you take a risk when you open the door, that you take a risk also for which you are none the less responsible when you close it on his hope.

The following is the table of farm and garden products, with their estimated value:

Apples, 137½ bushels, at 50 cents .....	\$68 75
Asparagus, 1,501 bunches, at 6 cents .....	90 06
Beans (Lima), 313½ bushels, at \$1 .....	313 50
Beans (string), 42½ bushels, at 75 cents .....	31 87
Beef (fresh), 1,449 pounds, at 7½ cents .....	108 68
Beets, 700½ bushels, at 50 cents .....	350 25
Beets, 2,315 bunches, at 3 cents .....	69 45
Beets (greens), 18 barrels, at \$1 .....	18 00



Blackberries, 90 quarts, at 10 cents.....	90 00
Cabbage, 25,270 heads, at 5½ cents.....	1,389 85
Cabbage sprouts, 123 barrels, at \$1.....	123 00
Carrots, 985 bunches, at 3 cents.....	29 55
Carrots, 90 bushels, at 50 cents.....	45 00
Celery, 8,408 heads, at 4 cents.....	336 32
Chickens, 26½ dozen, at \$4.....	105 00
Cucumbers, 817, at 1 cent.....	8 17
Cherries, 81½ bushels, at \$3.....	243 75
Currants, 232 quarts, at 15 cents.....	34 80
Cauliflower, 400 heads, at 15 cents.....	60 00
Corn (green), 1,666½ dozen ears, at 10 cents.....	166 63
Cantaloupes, 824, at 3 cents.....	24 72
Ducks, 11½ dozen, \$5.....	57 08
Eggs, 2,532½ dozen, at 16 cents.....	405 1½
Egg plants, 929, at 3 cents.....	27 87
Figs, 115 quarts, at 20 cents.....	23 00
Geese, 29, at 75 cents.....	21 75
Grapes, 15,951 pounds, at 5 cents.....	797 55
Honey, 32 pounds, 12 cents.....	3 84
Kale, 347 barrels, at \$1.....	347 00
Lettuce, 3,718, at 2 cents.....	74 36
Leeks, 3,362 bunches, at 6 cents.....	201 72
Milk, 35,556 gallons, at 30 cents.....	10,666 80
Onions, 32 bushels, at \$1.....	32 00
Onions, 4,535 bunches, at 5 cents.....	226 75
Onions (setts), 6 bushels, at \$8.....	48 00
Oyster plants, 1,809, at 1 cent.....	18 09
Parsley, 2,962 bunches, at 3 cents.....	88 86
Parsnips, 287 bushels, at \$1.....	287 00
Peppers, 116 pecks, at 50 cents.....	58 00
Pease, 205½ bushels, at 75 cents.....	154 31
Pork, 31,916 pounds, at 6 cents.....	1,914 96
Pigeons, 200, at 25 cents.....	50 00
Potatoes (Irish), 837½ bushels, at 75 cents.....	628 00
Potatoes (sweet), 106 bushels, at 50 cents.....	53 00
Pumpkins, 781, at 3 cents.....	23 43
Peaches, 134 bushels, at \$1.25.....	167 50
Pease, 20 bushels, at \$3.....	60 00
Quinces, 29 bushels, at \$3.....	87 00
Radishes, 1,720 bunches, at 3 cents.....	51 60
Radish (horse), 840 pounds, at 8 cents.....	67 20
Radish (greens), 3 barrels, at \$1.....	3 00
Rhubarb, 293 pounds, at 3 cents.....	8 79
Raspberries, 297 quarts, at 15 cents.....	44 55
Strawberries, 3,941 quarts, at 12½ cents.....	492 63
Spinnach, 43 barrels, at \$1.....	43 00
Squash (summer), 3,687, at 2 cents.....	73 74
Squash (turban), 1,935 pounds, at 3 cents.....	58 05
Turkeys, 20, at \$1.50.....	30 00
Turnips, 397 bushels, at 50 cents.....	198 50
Turnips (greens), 15 barrels, at \$1.....	15 00
Tomatoes, 930 bushels, at 50 cents.....	465 00
Veal, 706 pounds, at 8 cents.....	56 40
Watermelons, 1,133, at 6 cents.....	67 98
	<hr/>
	21,824 97

The following are the products that were consumed on the farm, and consequently are not a part of the profits:

Corn (shelled), 300 bushels, at 60 cents.....	\$180 00
Corn (fodder, green), 27 acres, at \$35.....	945 00
Corn (fodder, dry), 60 tons, at \$15.....	900 00
Grass pasturage.....	1,000 00
Grass (green), 6 acres, at \$30.....	180 00
Hay, 200 tons, at \$20.....	4,000 00
Mangel-wurzel, 117 tons, at \$14.....	1,638 00
Oats (green), 6 acres, at \$30.....	180 00
Ruta-baga, 47 bushels, at 45 cents.....	21 15
Straw (rye), 45 tons, at \$15.....	675 00
	<hr/>
	9,719 15

It will be observed that, notwithstanding some products are light and all prices are low, the farm is year by year advancing in value. Our vineyard, with an annual yield of about eight tons of very excellent grapes, is a matter of pride and a pleasant feature of our farm. We hope to make our fruit orchard an equal success. The peach trees that were set three years ago are now coming into bearing, and another peach orchard of about three hundred trees has been planted this year; also between three and four hundred standard pear and apple trees have been added to the old orchard, fruit being a dessert of which our people do not easily tire. The daily supply of milk from the farm has averaged more than ninety-seven gallons, at the present writing it is one hundred and thirty gallons, and none of it is wasted; pure, fresh Alderney milk not being objectionable to any one. We still lack for barn room. The pork produced is 31,916 pounds, nearly double that of any previous year. The new piggery on the out-farm will enable us to transfer our extensive herd of swine to more commodious quarters, and at the same time rid the hospital grounds of inclosures that, from the proximity of the new buildings, have become unsightly. By the appropriation of \$15,000 by Congress at its last session for the fitting and furnishing of the relief building we have been enabled to occupy it at once, and the relief to our overcrowded wards is very manifest. As we have already spoken of this under the uses of our detached buildings, it is sufficient to say here that it is an entire success, and that we have as yet hardly begun to realize the advantage it will be to our hospital. The accommodations for help in the second story of the bakery have been completed, and are of a most satisfactory character; those in the fourth story of the main building are now in process of completion, and in addition to the greatly increased room for domestics, which is sadly needed, will give us more dormitories and a very cheerful day room for the infirmary of the male department.

As the detailed statement of receipts and expenditures made by the Superintendent for the fiscal year ending June 30, 1880, as required by the act of Congress at its last session, accompanies this report as an appendix, the usual table is omitted here.

The estimates of appropriations for the fiscal year ending June 30, 1882, are as follows:

1. For the support, clothing, and treatment in the Government Hospital for the Insane of the insane of the Army and Navy, Marine Corps, and Revenue Cutter Service, and of all persons who have become insane since their entry into the military or naval service of the United States, and who are indigent, and of the indigent insane of the District of Columbia, \$196,875.

The number of patients under treatment in the hospital on the 30th of June, 1880, was 897, and on the 31st of August it was 900. While it is to be hoped that, under the law as it now stands in relation to the admission of patients, no great increase of numbers will occur, there is no probability of any diminution, and it will not be safe to estimate for a less average than 875 of the class of indigent patients to be provided for during the fiscal year of 1881-'82. Estimating the cost per capita at \$225 per annum, which, as it includes all hospital expenditures, except those for repairs and new buildings, is certainly moderate, the amount required to be appropriated by Congress will be \$196,875.

2. For general repairs and improvements, \$10,000.

Anything like an economical administration of a hospital for the insane renders it imperative that all parts of the establishment should be kept in complete repair, and it is important that every want in this di-

rection should be met as soon as it occurs. When it is remembered that, in addition to the repairs to the building, there are roads extending over four hundred acres of land, with ornamental grounds, requiring almost constant care and expenditure for improvements, it may fairly be a question whether a distinct appropriation should not be asked for the care of gardens and lawns in addition to the above.

3. For special improvements, \$40,000.

The following special improvements are asked, viz, a supply of pure water; additional accommodations for stock, hay, and farming implements; a detached kitchen and scullery; a mortuary building; a greenhouse: in all, \$40,000.

A hospital of 900 patients, with more than 1,100 persons dependent upon it for so vital a necessity as water, ought not to have that supply so at the mercy of the elements that every storm changes it to mud. The Anacostia grows dirtier every year. The United States has munificently supplied the city of Washington with a river of pure water for its daily use, and leaves its own hospital for the insane, just beyond the Anacostia, to pump up that muddy stream and filter or settle it as best they may, when a six-inch water main from the United States Arsenal laid in the river-bed to the hospital ground, a distance of about three-fourths of a mile, mostly in shallow water, would settle the question of an abundant supply of most excellent water. The expense would probably be about \$25,000 to bring the aqueduct water to the present pumps, which are ample for all requirements. This is surer than any filtration of the present supply or any possible supply to be drawn from artesian wells to be sunk on what is at best an uncertainty. In view of the urgency of the need, it is asked that the appropriation of \$25,000 for a pure water supply be made immediately available.

Another pressing want of the hospital is additional room for the housing of stock, and storing of hay and farming implements. At present the insufficient accommodations render it necessary to stack a considerable portion of the hay crop, thereby exposing it to liability of injury from the weather. More room for stock is an imperative need. The milk product of the hospital farm has increased from 15,920 gallons in 1875 to 35,556 gallons in 1880, without any new buildings for sheltering the greatly enlarged herd, except a few sheds which afford very indifferent winter protection. It is asked that \$5,000 may be made immediately available for these very necessary farm buildings.

The kitchen, now situated in the basement of the hospital, directly under the offices, should be transferred to a detached one-story building erected for the purpose, whereby the heat and discomfort, as well as the odor of cooking, now so generously dispensed throughout the center building, would be removed and a more light and comfortable provision made for the culinary and domestic department.

The hospital is deficient in those facilities for pathological research that a suitable mortuary building would afford and which the interests of medical science demand.

As more attention is paid to the ornamentation of the grounds, looking to the out-door treatment of the inmates, the economy of a greenhouse of sufficient dimensions for the propagation of such bedding plants as are required every spring becomes apparent; something more liberal than this, that should give our inmates cut flowers for their rooms and a winter garden for their recreation, would surely not be amiss; their lot is not an enviable one, even when you have done all this.

4. For the erection of a distinct hospital building for the female in-

sane, \$250,000; for expenditure in the fiscal year ending June 30, 1882, \$75,000.

The importance of a separate building and inclosed grounds for the female insane is nowhere more clearly shown than at the Government Hospital for the Insane. The male patients being largely in excess in point of numbers, in all matters of privilege of grounds and freedom of life, the weaker party, as usual in such cases, goes to the wall. It is simply impossible to do full justice to either sex in the matter of freedom from restraint and abundant out-door exercise so long as both are kept in the same buildings and share the same grounds. With the present hospital edifice and surrounding buildings devoted exclusively to the care of the male patients, and a new building, built on a distinct site, with all the modern improvements, for the female insane, the United States would have as complete and satisfactory provision for the care of her unfortunate insane as, speaking from the standpoint of present knowledge, could be desired. The number of females under treatment on the 30th of June, 1880, in the Government Hospital for the Insane was 206; this number will gradually increase, but it is thought that buildings designed for 250 patients will be an ample provision for the present, especially as the plan would admit of being hereafter extended to accommodate 350 without marring the architectural effect or impairing its efficiency as a hospital. While the grounds would be separated from the site of the present hospital by a dividing wall, they would be easily accessible from it for supervision, and the same laundry, bakery, water and steam supply could be made available for both departments.

It is believed that such a hospital, complete in all its appliances can be built of brick in the most substantial manner for \$250,000. As the best results in building will be attained by occupying three years in its completion, only a portion of the whole amount, \$75,000, is asked for the year 1881-'82, and that to be made immediately available.

5. A deficiency in the amount required for the support of the hospital and for repairs in the current year 1880-'81; for support \$32,000, for repairs \$5,000, making together \$37,000.

The estimated sum required and asked for the support of those patients who, in accordance with the law, are entitled to free provision in the hospital during the year ending June 30, 1881, was \$191,025, less one-half the cost of supporting the indigent insane of the District of Columbia, admitted since July 1, 1876, estimated at not far from \$16,000, which is, under the law of 1876 charged to the District, leaving \$175,000 to be appropriated by Congress. The amount appropriated was \$143,000, the difference between the appropriation and estimate being \$32,000 which is the deficiency, as above stated. The estimate for ordinary repairs and improvements was \$10,000, and the appropriation \$5,000, and the difference is \$5,000, as also stated above. These estimates were made after a careful consideration of the necessary expenditures for the proper care of an assumed number of 850 free or government patients, and a knowledge of what repairs and improvements would probably be necessary to maintain an efficient administration of the hospital in all its departments, and the estimates were designed to be as close and economical as is consistent with the welfare of the insane. The average number of indigent insane for the first month of the year has exceeded by more than twenty the number on which the estimate was based, and unless there is a very decided reduction in the number to be provided for, which we have no reason to expect, the deficiency asked will prove barely sufficient to provide all that the best care and treatment demands at our hands. The \$5,000



asked for repairs is needed to keep the government property from deterioration, and to obviate the necessity of a much larger expenditure in the future.

Just at the close of the year, Dr. Robert H. Chase, who had been connected with the medical staff of the hospital since the autumn of 1872, and had held the post of senior assistant for the last three years, resigned his place to accept the position of superintendent of the male department of the new State Hospital at Norristown, Pa. It was a deserved promotion, after nearly eight years of painstaking and devoted service, and the doctor carries with him the best wishes of the board for his success in his new field of enlarged responsibility and labor.

The vacancy in the staff of medical officers occasioned by the resignation of Dr. Chase has been recently filled, by the appointment of Dr. George W. Foster, of Bangor, Me., to the position of third assistant physician. Dr. Foster is a graduate both of the literary and medical departments of Bowdoin College; he was for a time connected with the New Hampshire Asylum for the Insane, and has given considerable attention to the study of insanity while in general practice. He appears to be well fitted for the important work which he undertakes.

The other officers of the staff have continued to render that efficient service which increased experience and their devotion to the work insure. Much of the year's success is due to their labors.

We are indebted to several Washington amateurs in music and the drama for a number of enjoyable evening entertainments, given before our household during the winter season; also to the directors of the National Fair Association for admission of our patients to their grounds, and to Colonel Casey and thoughtful lady friends who have remembered us with gifts of flowers.

It is now twenty-five years since this hospital was opened, and we hope that its work for humanity is but just begun. The nation's hospital, standing as the exponent of American civilization in the direction of the care and treatment of the insane, we again commend it to the liberal care of Congress that created it.

We are, very respectfully, your obedient servants,

JOS. K. BARNES,  
*President of the Board.*  
W. W. GODDING,  
*Secretary, ex-officio.*

Hon. CARL SCHURZ,  
*Secretary of the Interior.*

REPORT OF THE COLUMBIA INSTITUTION FOR THE DEAF  
AND DUMB.

COLUMBIA INSTITUTION FOR THE DEAF AND DUMB,  
*Kendall Green, near Washington, D. C., October 29, 1880.*

SIR: In compliance with the acts of Congress making provision for the support of this institution, we have the honor to report its progress during the year ending June 30, 1880.

NUMBER OF PUPILS.

The pupils remaining in the institution on the 1st of July, 1879, numbered.....	75
Admitted during the year.....	25
Since admitted.....	28
Total .....	128



Under instruction since July 1, 1879, males, 120 ; females, 8 ; of these 79 have been in the collegiate department, representing 24 States and the Federal District, and 49 in the primary department. A list of the names of the pupils connected with the institution, since July 1, 1879, will be found appended to this report.

#### HEALTH OF THE INSTITUTION.

General good health has prevailed in the institution since the date of our last report, and the few cases of sickness that have occurred yielded to treatment, with a single exception.

Quite a number of the pupils have suffered from maladies of the eye and ear. In every instance, however, these difficulties have been successfully treated by Dr. Francis B. Loring, of Washington.

#### DEATH OF MOSES ROBINSON.

Moses Robinson, a pupil of our primary department, from the District of Columbia, was attacked, in August last, with hemorrhages from the lungs. With an inherited tendency to pulmonary disease, his recovery from this illness was only partial, and it soon became evident that he was in quick consumption. He died on the 23d instant, having failed in strength steadily from the time he was taken sick. His record as a pupil was that of a boy who tried to do his duty. Through all his suffering he was patient and cheerful, and when it became certain that he could not recover, he did not murmur at the will of God, for he had earned to trust Him as a loving father and an all-sufficient Saviour.

#### CHANGES IN CORPS OF INSTRUCTORS.

Mr. Wilbur N. Sparrow, a graduate of our college, B. A., 1877, who for the past two years has been an instructor in our primary department, resigned his position last June. Mr. Sparrow had performed his duties in a most satisfactory manner, and carries with him in his retirement the best wishes of all with whom he was associated. Mr. Theodore A. Kiesel, of Delaware, a member of the present senior class in the college, has been employed to succeed Mr. Sparrow.

#### COURSES OF INSTRUCTION.

The work of instruction in the several departments of the institution has proceeded with no essential changes, the courses of instruction remaining substantially the same as described in former reports.

Articulation has been continued with the pupils of the primary department, an increased number receiving the benefits of instruction in this branch. The results are highly encouraging, so much so as to suggest the employment of a second instructor in articulation at no distant day.

#### LECTURES.

The following lectures have been given by the professors and instructors in the two departments.

To the students of the collegiate department :

*The Monroe Doctrine and the Panama Canal* ; President Gallaudet.

*Books* ; Professor Porter.

*Origin of the French Language* ; Professor Fay.

*Views of Ireland and Scotland, and the Yosemite Valley, given with the magic lantern*; Professor Chickering.

*Lessons from Chemical Recreations*; Professor Gordon.

*Athletic sports among the Ancient Greeks*; Assistant Professor Hotchkiss.

*The Roman Calendar and manner of dividing time*; Assistant Professor Draper.

To the pupils of the primary department: A course on Natural Philosophy, by Mr. Denison. A course on Physical Geography, by Mr. Ballard. A course on Geology, by Mr. Sparrow.

#### EXERCISES OF PRESENTATION DAY.

The exercises of the regular public anniversary of our collegiate department took place on the 5th day of May in the chapel of the institution. The President of the United States, in his capacity as patron of the institution, occupied the chair. The exercises were opened with prayer by the Rev. Samuel H. Green, pastor of Calvary Baptist Church, Washington, D. C.

The candidates for degrees delivered essays as follows:

*Oration*: The Elizabethan Age of English Literature; James Irvin Sansom, Pennsylvania.

*Dissertation*: Benjamin West; Arthur Dunham Bryant, District of Columbia.

*Oration*: Man in his Threefold Nature; Lester Goodman, Illinois. Messrs. Goodman and Sansom were presented by the president of the college to the board of directors as candidates for the degree of bachelor of arts. Mr. Bryant was presented as a candidate for the degree of bachelor of philosophy.

President Gallaudet then introduced Mr. Alexander Graham Bell, lecturer on speech in the Johns Hopkins University, and the distinguished inventor of the telephone, referring to the important service Mr. Bell had rendered the cause of deaf-mute education by the adaptation of his father's invention of *visible speech* to the instruction of deaf mutes in articulation.

Mr. Bell then delivered a very interesting address on *Melville Bell's visible speech*, explaining the process by which deaf-mutes are taught to speak by the aid of this very valuable discovery.

President Gallaudet then introduced the Hon. J. Randolph Tucker, Member of Congress from Virginia, who addressed the graduating class, and expressed in earnest and eloquent language his interest in and approval of the work of the college.

In pursuance of votes of the board of directors, the following honorary degrees were conferred:

*Master of arts* on Edmund Booth, editor of the Anamosa Eureka, Anamosa, Iowa, an early graduate of the Hartford Institution for the Deaf and Dumb, and for many years a successful editor in the West.

*Doctor of philosophy* on Alexander Graham Bell, in recognition of his important services in the cause of deaf-mute education, and his well-deserved renown as a scientific discoverer.

The exercises of the day were closed with the benediction by Rev. C. K. Marshall, D. D., of Mississippi.

At the close of the academic year, on the 23d of June, degrees were conferred in accordance with the recommendations of presentation day. The degree of bachelor of arts was also conferred on Henry White, of Massachusetts. From the primary department, Margaret Ryan and

Edward Carter, of the District of Columbia, and Wilbur Fish Bateman, of Ohio, were graduated with suitable diplomas. Frederick C. Cook, of New York, Paul S. Morley, of Pennsylvania, and Frederick W. Wood, of Massachusetts, were promoted to the collegiate department at the opening of the present term.

#### MEDAL FROM THE PARIS EXPOSITION OF 1878.

The work of our collegiate department received a gratifying recognition during the year now under review, in a diploma and silver medal from the Paris Universal Exposition of 1878. The delay in receiving these distinctions grew out of a misunderstanding as to the correct name of the college; the word Columbia in the corporate title of the institution having been incorrectly applied to the college.

#### INTERNATIONAL CONVENTION OF INSTRUCTORS OF THE DEAF AND DUMB AT MILAN, ITALY.

As authorized and directed by a resolution of the board, adopted in April last, the president during the past summer visited Europe for the purpose of attending an international convention of instructors of the deaf and dumb, invited to meet at Milan, Italy, on the 6th day of September.

This convention was composed of 164 members, of which number 87 were from Italy, 56 from France, 8 from England, 5 from the United States, 3 from Scandinavia, 3 from Germany, 1 from Belgium, and 1 from Switzerland.

The subject which occupied the attention of the convention to a greater extent than any other was, the instruction of the deaf in articulation.

The two institutions of Milan have been laboring most assiduously during the past few years for the development of speech and lip-reading among their pupils.

The ample means at their command have enabled them to assign a teacher to every eight pupils; the proportionate number of teachers being thus double that provided in the majority of American institutions. This great advantage, taken in connection with the peculiar ease with which Italian speech may be acquired by deaf-mutes, has enabled the Milan school to succeed in imparting speech and lip-reading to a much larger proportion of their pupils than has heretofore been considered possible in articulating schools for the deaf.

These results were brought prominently to the attention of the convention in a variety of ways, and exerted so great an influence that it was not difficult for those who were interested in the pure oral method to secure the adoption of such resolutions as they desired to have passed.

Instructors of long experience in England, France, Belgium, Sweden, and the United States urged the claims of the *combined system*, in which articulation is accorded all due prominence, but in which the language of signs and the manual alphabet are made use of as adjuncts too valuable to be dispensed with.

Their views, however, did not prevail, and the convention, by a large majority, adopted the following resolutions:

"I. The convention, considering the incontestable superiority of speech over signs, (1) for restoring deaf-mutes to social life; (2) for giving them greater facility of language, declares that the method of

articulation should have the preference over that of signs in the instruction and education of the deaf and dumb.

“II. Considering that the simultaneous use of signs and speech has the disadvantage of injuring speech and lip-reading and precision of ideas, the convention declares that the pure oral method ought to be preferred.”

The recommendations of these resolutions are, in our opinion, wholly inadequate to meet the wants of all the deaf and dumb. No fact is more plainly established than that a very large proportion of this class of persons cannot be taught to speak and to read from the lips *well*. And it is the judgment of many instructors of the largest experience, both in America and in Europe, that time and money are wasted in an attempt to impart speech to such as are plainly incapable of achieving anything more than a very partial success.

The resolutions of the Milan convention are, in our opinion, open to the very serious criticism of disingenuousness, for they recommend an entire abandonment of signs in the instruction of the deaf; while, in the debate which preceded their adoption, many supporters of the “pure oral method” freely acknowledged that they used signs to a certain extent, but voted down a resolution which recognized this fact.

Now the combined system, which has been advocated by the officers of this institution for the last thirteen years, welcomes every practicable means of advancing and perfecting the education of all the deaf and dumb. The supporters of this system do not object to the establishment of schools in which the “oral method” may be employed, provided that at the same time other schools can be maintained for the benefit of those who are incapable of success in speech. What is objected to most strenuously is that a procrustean method should be insisted on, the general adoption of which would not fail to bring disappointment and serious loss to many who under a system adapted to their needs might reach satisfactory results.

Among the subjects discussed at the Milan convention was that of the collegiate education of the deaf and dumb. No high schools or colleges for deaf-mutes have been as yet established in Europe, and naturally the convention listened with great interest to a paper presented by the president of this institution, giving an account of the practical solution of the question of higher education, in the successful operation for now sixteen years of our collegiate department.

The example of liberal benevolence presented by the United States in the support of this institution will, without doubt, have its effect in due time on our sister nations.

\* \* \* \* \*

#### EDUCATION OF THE FEEBLE-MINDED.

In the act making appropriations for the sundry civil expenses of the government, approved June 16, 1880, the following paragraph is attached to the clause providing for the support of this institution:

*Provided*, That when any indigent applicant for admission to the institution belonging to the District of Columbia, and being of teachable age, is found on examination by the president of the institution to be of feeble mind, and hence incapable of receiving instruction among children of sound mind, the Secretary of the Interior may cause such person to be instructed in some institution for the education of feeble-minded children in Pennsylvania or in some other State, at a cost not greater for each pupil than is or may be for the time being paid by such State for similar instruction, and the sum necessary therefor is appropriated out of the sum above provided for current expenses of the institution.

One applicant has taken advantage of this provision, and has been placed in the Pennsylvania Training School for Feeble-Minded Children, at Media, near Philadelphia. Dr. Kerlin, who has charge of the institution, reports very favorable development, and gives reason to hope that the child will be greatly improved within a reasonable time.

#### EDUCATION OF THE BLIND.

Appended to this report will be found a statement from F. D. Morrison, superintendent of the Maryland Institution for the Blind, as to the number of United States beneficiaries in that institution during the past year and as to the progress they have made. These blind children are in the Maryland Institution under the provisions of section 4869 of the Revised Statutes, and with the approval of the president of this institution, as required by law.

All of which is respectfully submitted by order of the board of directors.

EDWARD M. GALLAUDET,  
*President.*

Hon. C. SCHURZ,  
*Secretary of the Interior.*

### REPORT OF THE FREEDMEN'S HOSPITAL AND ASYLUM

FREEDMEN'S HOSPITAL,  
*Washington, D. C., October 1, 1880.*

SIR: I have the honor to present the annual report of the Freedmen's Hospital and Asylum for the fiscal year ending June 30, 1880, as follows:

The whole number of patients in hospital during the year was 1,119, viz:

Remaining in hospital June 30, 1879 .....	217
Admitted to hospital during the year, viz:	
Males, white .....	250
Females, white .....	37
Born in hospital, viz:	
Males, white .....	0
Females, white .....	4
Whole number of white .....	291
Admitted to hospital during the year, viz:	
Males, colored .....	253
Females, colored .....	219
Born in hospital, viz:	
Males, colored .....	25
Females, colored .....	31
Whole number of colored .....	523
Transient .....	83
Total number admitted, supported, and treated in hospital .....	1,119
Of the above patients there were discharged cured .....	585
Discharged relieved .....	20
Discharged, transient .....	83
Died .....	130
Still-born .....	4
	831



Remaining in hospital June 30, 1880:

Males, white .....	29	
Females, white .....	4	
	<hr/>	33
Males, colored .....	101	
Females, colored .....	94	
	<hr/>	195
		<hr/> 228

The Colored Orphans' Home and Asylum, containing about 115 children and attendants, has been furnished with medicines during the year. This institution was formerly a part of the hospital; but as it now receives a separate appropriation from Congress, this assistance is withheld.

Besides the above, a large dispensary has been supported for the benefit of the numerous poor who are constantly applying to this hospital for aid. Of these, the names of 1,949 have been entered in the book for out-patients, and about 4,000 prescriptions have been made and put up for them.

\* \* \* \* \*

The appropriation for the support of this hospital for the fiscal year ending June 30, 1880, was \$41,736.

The morning report shows that 85,563 days of support have been afforded to patients during the year. Without the rent, this makes the daily cost of each patient for subsistence, medicines, nursing, and clothing less than 45 cents.

It is believed that no governmental or eleemosynary institution in the District affords so good care and treatment for the amount of money expended as this hospital.

As evidence that the patients are well cared for here, I cite the fact that most of them, white and colored, when cured leave the hospital with reluctance, and most of those who have once been treated here, when again overtaken by accident or disease, apply a second, third, fourth, and even a fifth time for admission.

The necessity for the continuance of this hospital is manifest from the constantly increasing number of applications for the admission of persons suffering from accidents, from wounds, and from severe diseases. The number of admissions this year exceeds that of last year by 177, and that of the year before by 300.

Two hundred and eighty-six persons were admitted during the year by recommendation of the police. In fact this is the only general hospital for the reception of all classes of patients within the District. Many of the patients are non-residents, and must be provided for somewhere by the general government when they fall sick in this city. The location of the hospital is central and healthy. Not a case of original malarial disease has been known to occur within the premises since they have been occupied for their present purposes, and only one case of typhoid fever.

It will be perceived that the character of the hospital, so far as color is concerned, is changing; of 503 admissions to the male wards during the year, 250 were white and 253 were colored. Thus it is evident that this institution is supplying the need of a general hospital, which has been so long felt in this community.

Very respectfully, your obedient servant,

G. S. PALMER, M. D.,  
*Surgeon-in-Chief.*

Hon. CARL SCHURZ,  
*Secretary of the Interior, Washington.*

## REPORT OF THE GOVERNOR OF UTAH TERRITORY.

UTAH TERRITORY, EXECUTIVE DEPARTMENT,  
*Salt Lake City, September 20, 1880.*

I have the honor to submit the following report of the condition of this Territory, in compliance with your request:

## PUBLIC LANDS.

The United States land office at this point makes the following showing for the fiscal year ending June 30, 1880:

Pre-emption filings, 302.

Pre-emption cash entries, 113; embracing 16,392 acres.

Homestead entries, 508; embracing 78,601 acres.

Homestead proofs, 161; embracing 20,021 acres.

Desert entries, 69; embracing 12,654 acres.

Desert proofs, 38; embracing 5,089 acres.

Timber-culture entries, 36; embracing 4,043 acres.

Coal entries, 2; embracing 791 acres.

Mineral applications, 156.

Mineral entries, 101.

Adverse mining claims, 116.

This table shows an increase in the following class of entries over the preceding year:

Homesteads, 6,600 acres.

Final homesteads, 7,300 acres.

Desert entries (proofs), 4,770 acres.

Timber-culture entries, 1,700 acres.

Mineral applications, 83 in number.

Mineral entries, 24 in number.

There has been a decrease in the following class of entries, viz:

Pre-emption filings, 320 in number.

In cash entries, 2,100 acres.

Desert entries, 175 acres.

Adverse mining claims, 41 in number.

The agricultural claims initiated as against the former year show a falling off of 30, although the acreage is slightly increased, while the proofs thereunder show an increase of 15. In other words, the agricultural settlements made in the past year were 915 against 1,224, and the proofs 312 against 297 in the preceding year.

The falling off in the initiation of agricultural claims proves that a large per cent. of the farming lands which are surveyed in the Territory are taken up under the several acts granting rights to settlers.

The most prominent feature of this table is the increase of mineral applications and mineral entries, the former more than doubling the number of any previous year, and the latter increasing about 24 per cent. over the preceding year. Notwithstanding this remarkable increase of mineral applications there has been a corresponding decrease in the number of adverse mining claims filed, which fact speaks well for the mining industry of this Territory.

## CATTLE AND SHEEP.

From the most reliable information that it is possible to obtain, I estimate the number of cattle in the Territory to be 200,000 head. There

were driven from the Territory during the year past certainly not less than 50,000 head, at an average price of \$15.50 per head.

The number of sheep in this Territory will not fall short of 500,000, with a yield of wool of, say, 2,000,000 pounds, for which our raisers have received 20 cents per pound.

The winter ranges for the most part are rapidly filling with population, which, of course, crowds the stock men off of them. The excess of summer over winter ranges is in the ratio of 3 to 1 at present. The fact that the winter ranges have been overstocked, rendering them worthless for the present, is another reason for the difference between them and the summer ranges.

Without legislation by Congress that will allow stock-raisers to obtain rights other than those given by common consent, this very important branch of industry must continue to retire before the demands of increasing population.

#### AGRICULTURE.

Notwithstanding the dearth of water during the summer of 1879, which in some localities left very short crops, the yield of wheat, oats, and barley proved to be an average one. The potato crop, as a rule so extensive and superior, proved a very short one, but the crop for 1880 will be abundant. The summer of '79, with very little rain-fall and an exceptional scarcity of water from the mountain snows, was followed by a severe and prolonged winter, proving deleterious to the crops of 1880. Corn, which is by no means a reliable growth, on account of the exceptionally late spring, was given a very small acreage by our farmers. Lucerne to a great degree has taken the place of corn; being to a degree independent as to length of season and quantity of water, its thrifty growth and immense yields commend its cultivation. Lands that yield only ten bushels of wheat to the acre will readily yield eight tons per acre of lucerne. Three harvests, and oftentimes four, are gathered during the season, after it has become well set; in fact, in the southern part of the Territory five cuttings are made, yielding ten tons to the acre.

#### DRY FARMING.

The large tracts of land unoccupied by reason of the cost in having irrigating canals reach them, and oftentimes an impossibility to obtain sufficient water by irrigation at any cost, joined with an increasing population seeking homes, has caused dry farming to be greatly increased. Upon such farms last year from ten to twenty bushels per acre of wheat was raised. Many engaged in this apparently hopeless task continue their work from year to year, and are tenacious in their purpose to increase the acreage.

#### WATER.

Throughout the Territory irrigating canals are yearly increased and improved upon. Much land heretofore untilled is constituted thereby into farm homes. It is observable also that a greater acreage is from year to year cultivated with the same amount of water. This is secured by an economical distribution in the fields through which the streams or canals pass. When the water of twelve months that flows down the cañons is garnered in reservoirs, and these are supplemented by artesian wells with which to supply the crops in growing season, the now sage lands in the valleys of Utah will more than double their present product.

## POPULATION.

The population of Utah is far beyond that of any Territory in the history of the United States. In 1870 the population was 86,786. In 1880 it is shown to be 145,000, an increase of over 58,000 souls. The mines of the Territory, with their attendant business, have drawn, I may safely say, of this 58,000 increase, fifty per cent. The other fifty per cent. is natural increase, and the result of the labors of the missionaries sent out into all the world by "The Church of Jesus Christ of Latter Day Saints," which, besides increasing the population of Utah, is contributing largely to the population of the surrounding States and Territories.

## MINES.

I know of no fact why it may not reasonably be claimed that Utah will prove the richest repository of silver, gold, coal, and lead, and other minerals, of all the States and Territories of the West. Certainly no four hundred miles of mountain ranges have produced as many mines of immense yields, and so many mining prospects, as the suggestions of science and practical observation make those of Utah appear. The practice of capitalizing mining prospects at fabulous sums is to be condemned. Responsible mining men are reducing mining enterprises to a practical business basis. This will, as it should, tend to renewed confidence, and increased capital applied in a legitimate way to the development of ore bodies, instead of gambling in "wild cat" mining stocks, so unwarrantably and disastrously indulged in in the past.

Many mining districts heretofore inaccessible are now in close connection by railroads with the markets. Much of the ore, on account of its low grade, has not heretofore paid to mine; but which now, on account of superior methods in extracting and reducing the ore, is made profitable. As a rule, the men who own the best prospects are not able to develop them for lack of means. Capital is needed, and with anything like reasonable business judgment can be made to realize most gratifying results.

From Col. O. J. Hollister and Mr. J. E. Dooley I have obtained the following statement of the mining products of Utah, which, I feel assured, is a very correct record, viz: \$21,000,000 in value is the estimate of the Territory's output down to the end of 1875, usually received, based on records kept by Professor Barfoot, of the Salt Lake Museum. Fortunately the output of 1876-7-8-9 has been accurately figured and stated at the close of each of those years, by J. E. Dooley, agent of Wells, Fargo & Co., at Salt Lake City, and is of record.

It was for 1876:

Lead, 50,401,893 pounds, at 6 cents.....	\$3, 024, 113 00
Copper, 657,539 pounds, at 20 cents.....	131, 507 00
Silver, 1,946,915 ounces, at \$1.10.....	2, 141, 606 00
Gold, 8,820 ounces, at \$20.69.....	182, 309 00
Total.....	5, 479, 535. 00

It was for 1877:

Lead, 54,936,080 pounds, at 3 cents .....	\$1, 648, 082 00
Silver, 4,359,703 ounces, at \$1.20 .....	5, 231, 643 60
Gold, 17,325 ounces, at \$20.60 .....	356, 895 00
Total .....	7, 236, 620 60

It was for 1878:

Lead, 40,414,359 pounds, at 1½ cents .....	\$707,251 28
Refined lead, 2,620,422 pounds, at 4 cents .....	104,816 88
Copper matte, 1,259,100 pounds, estimated value.....	22,034 25
Copper pigs, 19,737 pounds, estimated value .....	2,066 83
Silver, 4,357,328 ounces, at \$1.13.....	4,923,780 64
Gold, 15,040 ounces, at \$20 .....	300,800 00
Total .....	6,060,749 88

It was for 1879:

Lead, 26,441,359 pounds, at 2½ cents .....	\$594,930 00
Refined lead, 2,301,267 pounds, at 4½ cents.....	103,557 00
Silver, 3,835,047 ounces, at \$1.10 .....	4,218,551 00
Gold, 15,932 ounces, at \$20.67 .....	329,314 00
Total .....	5,246,352 00

Summary.

Prior to 1876 .....	\$21,000,000 00
1876 .....	5,479,535 00
1877 .....	7,237,832 00
1878 .....	6,071,125 00
1879 .....	5,246,352 00
Total .....	45,034,844 00

The average output for the last four calendar years was a little more than \$6,000,000 yearly.

The product for the calendar year 1879 as given above is its *export value in Salt Lake City*. Computing the precious metals after the style of California and Nevada, viz, at their mint valuation, and the lead at its value in New York City, it would increase the value to \$6,663,676.10, as follows:

Deducting five per cent. for actual loss in refining lead, 27,520,568 pounds, at 5 cents, average New York price .....	\$1,376,028 00
3,835,047 ounces silver, at \$1.2929, mint valuation .....	4,958,333 26
15,932 ounces gold, at \$20.67, mint valuation .....	329,314 44
Total for 1879 .....	6,663,676 10

And other years proportionately.

RAILROADS.

I give the different roads, their gauge, weight of rails, and miles, and the number of miles opened during the last year, all of which speaks well for the business of the Territory, viz:

Gauge.	Name.	Miles.	Weight of rails.
			<i>Pounds.</i>
4 feet 8½ inches...	Central Pacific Railroad.....	154	56
4 feet 8½ inches...	Union Pacific Railroad .....	71	56
3 feet .....	Utah and Northern Railroad .....	77	30
4 feet 8½ inches...	Utah Central Railroad, Ogden to Salt Lake City, opened January, 1870 .....	30½	56
4 feet 8½ inches...	Utah Southern Railroad, Salt Lake City to Juab, Juab County, opened to Sandy, September, 1871, to Juab, June, 1879.....	105	56
4 feet 8½ inches...	Utah Southern Railroad extension, Juab to Frisco, opened to Milford, May, 1880, to Frisco, July, 1880 .....	137	56
3 feet.....	Utah Western Railroad, Salt Lake City to Stockton, Utah Territory, opened January, 1875.....	40	30
3 feet .....	Wasatch and Jordan Valley and Bingham Cañon Railroads, opened from Sandy to Granite, 1872, to Alta, 1876 .....	44	30
3 feet .....	Utah and Pleasant Valley Railroad, Provo to Pleasant Valley, opened October, 1879 .....	80	30
4 feet 8½ inches...	Summit County Railroad, constructed by the Union Pacific Railroad, to run from Echo to Park City, fourteen miles complete, about sixteen miles to build, will be finished by November 1...	35	56
3 feet .....	Utah Eastern Railroad, Coalville to Park City, twenty-three miles graded, and to be completed November 1, 1880, to be continued to Salt Lake City.....	23	30



A working survey is now being made by the Union Pacific engineers to demonstrate the practicability of a line from Brigham City, Utah, to Portland, Oreg. This line, if built, besides opening up a vast territory, will greatly shorten the line from the east to Yokohama, Japan.

#### INDIANS.

At the Uintah Reservation, in the northeast part of the Territory, there are about four hundred and fifty Indians who receive government supplies. In addition to these there is a small band living in Thistle Valley cultivating farms, and having in several instances disavowed their tribal relations. At the Uintah Agency there are 115 families, and of these some eighty-five are engaged in farming operations, and others, with a few exceptions, in stock-raising. Two hundred and fifty acres, however, is the aggregate, for this year, of land cultivated by them. This is less than in previous years, owing to a scarcity of seed, wheat having been used for subsistence last winter. Colonel Critchlow, in charge of that agency for a number of years, in his report of the year last past speaks at length of their conduct during the White River troubles, highly commending them. Although intimately related and always friendly with the White River Utes, they expressed no sympathy for them in hostility, and he now says of them that they express their gratification at the prospect of an amicable settlement of these difficulties. The Presbyterian Board of Missions has entered into a contract with the government and propose, at an early day, establishing a school for Indian children at this agency. Colonel Critchlow anticipates much benefit in future years, both to children and adults, from the educating and Christianizing influences of this school and mission.

In the vicinity of Plainfield, situated on the eastern border of the Territory, south of the Uintah Agency and near the La Sal Mountains, the inhabitants have felt much uneasiness on account of the bearing and trespasses of a number of Indians that frequent that section. The settlers are at their mercy, and with this point protected I can say the condition of Indian affairs in Utah is satisfactory, in so far as it is possible for me to know.

#### SOCIAL CONDITION.

The Territory of Utah stretches from the 37th to the 42d degree of latitude. With the exception of Utah there is now a solid line of States from the Atlantic to the Pacific Oceans. Between the same latitude and between the oceans lie twenty of the thirty-eight States of the Union. With the great roadways of the continent running through and joining within her borders; with the climate of this parallel, made lovely by altitude and softened by its location in the great basin between the Rocky Mountains and the Sierra Nevada, including in its population a large number of thrifty industrious, law-abiding and law-loving people; with all this there remains a reason why Utah should be denied statehood, possessing, as she does, requisites which, otherwise, would entitle her to be a State. The United States should give to Utah a good government; as it is she possesses "the shadow, but not the substance of government." There has not been that thrifty growth her valleys, mines, and situation entitle her to. As it is, Utah can never be American and in accord with a people whose highest allegiance is to the flag of the United States. And as long as Utah is allowed to remain with her present practices, organization and laws, it cannot be said that this government deals out equal and exact justice to all its citizens. It cannot be claimed that the United States sees to it that her laws are

fairly and surely executed. If not the chief corner-stone, at least a continuing practice of "The Church of Jesus Christ of Latter Day Saints" is polygamy, defended by its members, practiced by them, and solemnized with secret rites, without civil or church record, and by regularly appointed officers of the church. The church dictates, suggests, or its influences control all things spiritual or secular among its people. The officers of the church, and those in polygamy, to a great extent fill the offices in the Territory, enact its laws and execute them. Congress passed, in 1862, a law forbidding polygamy, and prescribed penalties. This law, I am sure, is approved by the entire law-abiding and well-thinking people of the United States from Maine to Texas. It has been adjudged by the Supreme Court to be constitutional, and yet the government for years has permitted the law to be ruthlessly thrust aside and others to be enacted that practically obstruct the statute, so as to make it impossible to convict under it, and allow the Territory to be governed in such a way as to put a premium on crime, and further permit the guilty ones to be sent to the legislature and to Congress, and paid for their record and services out of the Treasury of the United States.

Why should the Government of the United States allow one of its citizens to be sentenced to the penitentiary, say in New York, for violating a law of Congress and allow another here to go unwhipped in wilfully violating a law similarly passed and be promoted to office as a premium for his crime? Congress should wipe out its statute against polygamy, remove every officer who is sworn to see its laws executed, furnish free transportation to a quarter section of free land to each of the thousands of non-Mormons who with their stout hearts and strong muscles have made homes in this part of their country, repeal all laws objectionable to the dominant church here, so that the Territory may be run under ecclesiastical suggestion, pass a law constituting this an independent polygamous State, a thing apart from the "wicked people" of the United States; or it should at once make it possible to execute the laws already passed. One or the other. Sheer justice to the thousands of children yet to be born with illegitimacy as their birth-mark under this illegal and indecent system, mercy to the first and only wife, when lustful or religiously fanatical husbands thrust them aside for new and fresher companions, respect for its own laws, equal and exact justice to all,—these and more make plaintive demands of Congress for speedy and sure adjustment of the wrongs; the termination of contentions that curse this goodly land and must continue to do so until proper legislation brings relief.

Time will not prove the remedy. It is revelation (so-called) against statute law. If the United States proposes that Utah and several other of its Territories—soon to be overspread by emigration—is to be governed by revelation, well and good. If, however, it proposes in the future as in the past to govern by laws of Congress applicable for all the people, then it is all wrong. It is the right against the wrong. If Congress is right, if the Supreme Court is right, if the President is right, if the people of the United States are right on this question, then this idea here persisted in is wrong, as it tends, it has been claimed, and does practically unite church and state, enslaves this people, constitutes them law-breakers, and the whole un-American.

#### RECOMMENDATION.

In so far as practical take the old statute of 1787, enacted by the fathers of our country, and under which the Territory of the great

Northwest was formed, and under which so many States passed through their Territorial condition, and, in so far as practicable, later enactments, by which the District of Columbia is governed, and from that basis frame a statute for the government of Utah. Constitute a commission composed of the governor, the judges, and, say, three or five citizens of the Territory, they to be appointed by the President and confirmed by the Senate, and by this means establish a government here that will be in unison with American civilization, and will prove a government not only "for the people but by the people." *I again say time will not prove the remedy.* I earnestly hope for a peaceful solution of the problem here. Every effort with that end in view shall be, as it has been, mine. The Government of the United States, and those charged with the execution of its laws cannot, as they ought not, be dishonest in dealing with this question and the people here. A code of impartial, just, and uniform laws, with the means to administer it, and a fair and merciful execution of the laws is the peaceable solution.

There are other, and possibly more grievous wrongs, inflicted through legislation within the Territory of which I cannot well go into in a report of this nature, but which the plan suggested will remedy.

Further legislation is essential. I trust Congress will not delay consideration of this very important matter, and I respectfully suggest this action.

I have the honor to be, Mr. Secretary, most respectfully,

ELI H. MURRAY,

Governor.

The Hon. SECRETARY OF THE INTERIOR.

## REPORT OF THE GOVERNOR OF WYOMING TERRITORY.

EXECUTIVE DEPARTMENT, WYOMING TERRITORY,  
Cheyenne, November 20, 1880.

SIR: In compliance with your request of August 16, for a report of the progress of this Territory since the date of my quite full account of its resources and condition submitted in 1878, I have the honor to present the following:

### EVIDENCES OF GENERAL PROGRESS.

While the increase of population throughout the Territory has not been great since 1878, the settlement of some sections, more especially that portion lying east and north of the Big Horn Mountains, and embraced within the limits of the unorganized county of Johnson, has been quite rapid, so that but a short time can elapse before it will be necessary to proceed with the formation of a local government.

Growth has also been made in other remote sections, as well as along the line of Union Pacific Railway, where, especially in the larger towns and villages, the buildings erected and the general improvements made have been of that substantial character which indicates enterprise on the part of the people and a growing confidence in the future of the Territory.

### THE GRAZING INTEREST

is still foremost, as it is likely to be for some years to come, and has made steady advancement. The former herds have, in many cases, very

considerably added to their natural increase by importations from the States and Territories farther west, and a considerable number of herds entirely new have been introduced, not only in sections hitherto partially occupied, but also in larger regions, as, for example, in the Powder and Tongue River sections, until very recently wholly unoccupied except by herds of buffalo.

The number of cattle now in Wyoming can be hardly less than 540,000 head; and the indications are that this will be largely increased during the next season, now that the superior advantages of this Territory for conducting a successful cattle business are coming to be better understood in all parts of the world.

It is also worthy of note that our cattle are quite rapidly improving in quality. There are fewer importations of young stock than formerly from Texas, and a correspondingly large number from the West, where considerable attention is now given to the improvement of the native stock by the infusion of better blood. Besides this, our stockmen are improving the better herds brought from the regions named, by the direct importation of males of the best known breeds from the East.

Owing to the increased cost of cattle purchased West—caused by the growing demand—and the rather low price of beef in the Eastern markets, the profits of the cattle business have naturally diminished somewhat during the last two or three years; but they are still sufficient to entitle it to rank foremost among the legitimate and entirely safe industries of the country.

Sheep husbandry has likewise made steady progress since the date of my last report. Fluctuation in the price of wool has been a disturbing element, but seems not to have put any serious check upon the business, or materially weakened the confidence of those engaged in it. The last severe winter taught some of them the lesson of better provision for their flocks; but I hear of none who have been disheartened by losses.

The number of sheep at present in the Territory is probably not less than 375,000 head, being an increase of 175,000 head since 1878.

#### AGRICULTURE.

Notwithstanding the large areas so well suited to the production of the cereal, root, and grass crops, the agricultural industry advances but very slowly. This is partly due to the assumed superior profitableness of the stock business, and in part because of a lack of confidence in the possibility of a successful agriculture at so great an altitude as from 5,000 to 7,000 feet above the sea-level. And yet it is a fact that, wherever a fair trial has been made, wheat, rye, barley, oats, clover, timothy, potatoes, and other root crops, with garden vegetables of every sort, and some of the small and hardy fruits, have succeeded very remarkably, being excellent in quality and astonishing in yield. East and north of the Big Horn Mountains, as well as in other portions of the Territory, fine crops have, in some instances, been produced without irrigation. This can only happen in the more favorable seasons; but, with a proper supply of water, there are millions of acres in our many rich valleys that can be cultivated with a certainty of large yields; and, it may be added, with an equal certainty of liberal profits. For the most part, the lands are easily broken and cultivated; while an abundance of water, easily and cheaply rendered available, makes the husbandman sure of his reward.

With wheat at \$1.20 per bushel, oats at \$1.90 per hundred pounds, wild hay at \$18 to \$20 per ton, tame hay at \$24 per ton, potatoes at 2½



cents per pound, with all sorts of vegetables at corresponding prices, and with the small fruits producible here bearing prices yet higher in proportion, it is easy to see that the cultivation of the soil may be made a profitable business in Wyoming, more especially as lands of the best quality may be had under the pre-emption, desert, and homestead acts at merely nominal rates, and as the tilling of the soil can be carried on so conveniently in connection with the stock business.

I trust that the day is not far in the future when agriculture will have become an important element of our wealth and prosperity.

#### THE MINING INDUSTRY,

although for a time somewhat checked in its development by discoveries in the Black Hills, and the yet more remarkable developments at Leadville and other points in the neighboring State of Colorado, and the consequent exodus of some of our prospectors and miners, again shows encouraging signs of a growing activity. New discoveries of gold have been made in the Medicine Bow Mountains, on Douglass Creek, in Carbon County, as well as in Jelm Mountain, in Albany County, in both of which districts mills have been recently planted. Discoveries of silver in Uinta County have also been reported, and are attracting attention. Scientific observers and practical miners are alike firm in the conviction that when prospectors shall have turned their attention to Wyoming with anything like the zeal which has characterized their labors elsewhere, our mountains will be found as productive of the precious metals as any of those sections at present enjoying so remarkable a development.

It was this general conviction that prompted the legislature in 1879 to make provision for a Territorial geologist and mining engineer, to be charged with the duty of making scientific explorations with a view to new discoveries, and of assisting with his advice as an expert, when solicited, in the economical improvement of mines already opened.

As was set forth in my first report, we have not only inexhaustible supplies of coal, of excellent quality, and of which some three hundred thousand tons are annually mined and marketed, but likewise immense supplies of iron, graphite, petroleum, soda, and sulphur, with good indications at various points of very extensive bodies of copper ore. It is true that, with the exception of petroleum, which proves to be a superior lubricating oil, and is now in use by the Union Pacific Railway Company, those valuable resources are still lying untouched, capitalists being ignorant of them or claiming that, owing to bulk and cheapness of product, they cannot be profitably utilized until there can be had lower rates of transportation than those at present offered.

Encouraging responses to my appeals in this behalf have been made by the Union Pacific Company, however, with the assurance that as cases arise they will be dealt with in a most liberal spirit. I am not without hope, therefore, that eastern capital will soon be enlisted in the development of these vast resources.

#### THE MANUFACTURING INDUSTRY,

though slow in its development, for the reason that it waits on mining and cheap transportation, is nevertheless, advancing in some of its departments. A number of flouring and saw mills have been built within the past two years, and talk is heard of yet other kindred enterprises. Still, it must be said that many very advantageous fields in the domain



of manufactures which could be cultivated with profit remain wholly unoccupied. Besides the working up of our soda, graphite, and sulphur, the packing and canning of beef, the cording and spinning of wool, the manufacture of woollen cloths and of clothing therefrom, there are numerous other branches of the manufacturing industry that could be built at once with profit to the capitalist as well as general advantage to the Territory.

#### THE PRESERVATION OF GAME AND THE CULTURE OF FISH

have been promoted by recent legislation; the first by more stringent laws relating to the unnecessary destruction of our game of every kind, the latter by the creation of a Fish Commission and the appropriation of quite a liberal sum of money to be used in stocking the streams of the Territory with trout and other desirable species of fish. Under the law last above referred to, a competent and zealous commissioner has introduced large numbers of young trout into the headwaters of the Platte and other streams apparently well suited to this most excellent of all the fishes found natively in this region, but hitherto without it. This enterprise is so far successful and bids fair to result in the addition of several beautiful rivers to the already large list of the trout streams of Wyoming. Black bass have also been introduced into some of our lakes.

#### THE MORE IMPORTANT PUBLIC IMPROVEMENTS

recently made consist of—

1. A new wagon road from Rawlins to the Rapo-Agie Valley as a means of more direct communication with Fort Washakie and the Indian Reservation;

2. The construction of a line of telegraph between Camp Stambaugh and Fort Washakie, thus connecting that important post with the outside world;

3. The betterment of the stage road from Fort Fetterman to Fort Custer via Fort McKinney and the Goose Creek settlements;

4. The opening of a new and shorter wagon road from the base of the mountains, in the valley of the Little Laramie to the Douglass Creek mines;

5. The opening of a road from Cheyenne to the mining camps in North Park, and

6. Telegraph extension from Fort Fetterman to Fort McKenney.

A railway from Laramie City, through North Park, Middle Park, to important mineral districts in the mountains of Colorado has also been projected, and a company has been organized for the purpose of setting the enterprise on foot.

The North Park being inaccessible from the settled portions of Colorado, to which the greater part of it belongs, and yet freely opening into Wyoming, at a distance of only some fifty miles from the Union Pacific Railway, is naturally tributary to this Territory. And, inasmuch as the park, besides being a fine summer range for stock and abounding in coal and (it is said) copper is found to contain silver in amounts to justify very considerable expectations; and since, moreover, the face of the country, over which the proposed railway would naturally be built, is such as to render it quite easy of construction, this new enterprise may be considered altogether practicable.

The growing interest in the wonders of the National Park warrants

this repeated reference to the need of a direct wagon-road into it from Fort Washakie, from which it is distant scarcely more than one hundred and fifty miles. Such a road would pass through an interesting region of country, with attractions sufficient to reward the journey; and since it could be constructed with the help of idle troops in a single season and at very trifling cost, it seems not unreasonable to hope that this suggestion will find favor with the Federal authorities. At present access is practically confined to very roundabout and expensive routes through Idaho and Montana.

#### THE SURVEY OF LANDS

still lags behind the public demand. So great is the embarrassment experienced on this account that during the past season, settlers have repeatedly appealed to me for intervention in their behalf. It is hoped that Congress will very materially increase the appropriations for surveys so that the assignments to this Territory may prove more adequate to the reasonable demands of our people.

#### EDUCATION

continues to receive the fostering care of government and people. Although not numerous, the schools of the Territory are excellent in character, and well attended; attendance in the larger towns being 90 per cent. of all the children of school age. The last report of the superintendent of public instruction shows an aggregate of 36 schools, and of 49 teachers (29 male and 20 female), with the sum of \$22,121.45 paid as teachers' salaries. Owing to non-survey of the public lands, our education derives almost no help from this source, so productive in the more favored regions of the country.

#### LAW AND ORDER

now prevail as never before since the organization of the Territory. The vigorous co-operation of Federal and Territorial authorities with the counties and with interested corporations—especially the Union Pacific Railway Company and the Cheyenne and Black Hills Stage Company—resulted in breaking the bands of "road agents" by which we were so seriously afflicted in 1878, so that during the past season there has been almost entire immunity from their attacks.

#### THE RED MAN

no longer menaces Wyoming. With the exception of the 1,000 Arapahoes and the 1,300 Shoshones, all peaceably dwelling on their beautiful reservation in the Wind River country, and earnestly seeking the help of civilizing agencies, there is not an Indian within our borders. The settler locates in the wildest sections without fear of molestation, and the lone explorer wanders over our vast domain with a most comfortable and gratifying sense of security.

That this happy condition of things may continue indefinitely, it is urged that the government deal not only justly, but even generously, with the two remnants of tribes referred to. They are headed by chiefs remarkable for their friendly disposition, as well as for ability and influence, and a wise persistence of the Indian Bureau in its present policy towards them will insure their steady advancement. If yet more were

done than is now doing for their enlightenment, and for their encouragement in gradually taking up suitable industries, their future would be yet brighter. There is special need of a good industrial school for each tribe, and it would also be well if the higher and more complete education of a few of the more promising youth, at institutions of learning in the States, could be provided for.

#### IMPORTANT TERRITORIAL LEGISLATION.

Among the many important acts with which the sixth legislative assembly (legislation of 1879) is to be credited, and which have not been mentioned already, I refer with satisfaction to the law which provides that hereafter members of the council and house of representatives, Delegate in Congress, sheriffs, county clerks, probate judges, county treasurers, county and prosecuting attorneys, county commissioners, county superintendents of schools, coroners, surveyors, assessors, justices of the peace, and constables, shall be chosen *every two years*. Heretofore these officers, excepting members of the legislature and the Delegate in Congress, have been elected annually. This concurrence of elections, with diminished frequency, besides saving much unnecessary expense, will also serve to abate, in some degree, those evils which, under great frequency of elections, come of a perpetual ferment of political excitement and of undue rotation in office.

It is also worthy of note in this connection that a law was passed at the last session requiring that "the legislature of Wyoming shall convene at the capital of the Territory on the second Tuesday of January, in the year eighteen hundred and eighty-two, and on the second Tuesday of January every second year thereafter." Hitherto the sessions have been held in November.

#### CONCERNING THE IMPRISONMENT OF CONVICTS.

There has been much controversy during the recent years on account of the disposition made of persons convicted of crimes against the laws of the Territory. Formerly they were kept at the United States penitentiary near Laramie City. But as the number of convicts increased, the burden of their support, at the price demanded by the Department of Justice, namely, \$1 per day, was felt to be so great that negotiations were authorized with prison managers outside of the Territory, resulting at last in an agreement with the authorities of the Nebraska State prison for the keeping of our Territorial convicts at 40 cents a day, cost of transportation included.

The validity of the law under which this was done having been questioned on certain grounds, and finally on these and other grounds denied by one of the United States district judges, amendments were made thereto by the legislature of 1879, with the view of remedying its defects. But the validity of the new law was also questioned and finally denied by a majority of the Supreme Court, on the grounds—

1. That the organic act does not authorize the sentencing of prisoners to confinement outside the Territory.

2. That Congress has provided a prison within the Territory.

3. That courts of the Territory cannot exercise jurisdiction beyond its boundaries, and that writs of such courts can have no validity within the limits of any other Territory or State.

Whereupon a law was passed by Congress for the purpose of legalizing what had already been done by the Territorial authorities, and providing

for the future incarceration of prisoners of the Territory outside of its limits, at the discretion of the penitentiary commissioners, charged with making the requisite provision for the safe and economical keeping of convicts.

So far as the keeping of prisoners is concerned it is desirable in the interest of mere economy that they be kept, as at present, in the penitentiary at Lincoln, Nebraska, or at some other prison outside the Territory, so long as the difference in cost of keeping them there and at Laramie is so great as now. But nearly every other consideration lies on the side of their being kept in our own penitentiary. And inasmuch as the present United States marshal of the Territory is ready to enter into an agreement for keeping the Territorial convicts, at a price but little above the amount paid to the Nebraska penitentiary, with assurances of yet greater reduction as fast as possible, the only stipulation being as to number of convicts intrusted to his care, there seems to be but little in the way of accepting his terms other than the insufficiency of accommodations at Laramie, and the yet greater lack of the means of employing convicts in profitable industries.

In view of all the facts, it is in my judgment quite important that the Government of the United States, both on its own account and on that of the Territory, furnish the means necessary to the early fulfilment of these conditions.

The sixth legislative assembly memorialized Congress "for suitable legislation in reference to the public lands in Wyoming, so as to enable the several water-courses to be made available for agriculture." As was therein forcibly urged, there is nothing in existing laws to prevent a monopoly of water-privileges by comparatively few owners of large herds of cattle and sheep, to the practical exclusion of the agriculturist. This is a matter of great importance, not so much in the actual present as in the early future. As set forth under another head, the agricultural capabilities of Wyoming are far greater than is generally supposed, even by our own people. An interest so great as this should have immediate and full recognition. And yet it is manifest that if stock men are permitted to acquire absolute control of the valley lands, not with a view to their cultivation, but rather as a means of preventing it, and of controlling the largest possible area of contiguous grazing lands, to the exclusion of others who would occupy them, agricultural development will be impossible. In discussing this subject the memorial referred to says:

Your memorialists further represent that the laws of the United States in relation to the disposition of the public lands are wholly unsuited to the requirements of a country such as this, and need such reasonable modification and amendment as will adapt them to the circumstances which are peculiar to our location and situation.

The arid character of the soil and climate in this region of country renders it indispensably necessary that all occupants of the public lands should have a legal right of free access to the water-courses of the country.

The uplands and "divides" situate at a distance from the streams are covered with a luxuriant growth of nutritious grasses, but are comparatively worthless for any of the purposes of use and occupation unless the occupants can obtain some legal right to pass over adjacent lands to water.

The lands along the streams are being rapidly occupied and inclosed under present laws, whereby all access thereto is prevented. All this results in giving to those who have been so fortunate as to obtain prior rights to the lands along the streams a monopoly of the use of the uplands and divides without the necessity of purchasing the same, and prevents that complete occupation of the country which is necessary to its successful development.

\* \* \* The evil here adverted to grows in magnitude in proportion as the lands adjacent to the water-courses are occupied and inclosed under the present land policy of the government, and such occupancy and inclosure are daily becoming more extensive, so that it is but a question of a very short time, if a prompt remedy be not



afforded by Congress, when this whole Territory will be in the virtual possession of these few persons who have title to the small fractions of the land along the streams.

We believe that the water-courses of the country ought to be so controlled by proper legislation that they can be made available for the common and equal benefit, so far as possible, of all persons who may choose to occupy and improve any part of the public domain, and that legislation which would secure such benefit to all alike would be to the mutual advantage of the United States and of the Territory of Wyoming.

I need only add that suitable legislation of the kind proposed would also protect the interests of stockmen, now in some cases cut off from water privileges by miles of fencing, erected by those who have in some instances acquired control of long strips of land up and down the water-courses, for the purpose of cutting grass therefrom for the market. It is earnestly hoped that this whole subject will have early attention from Congress.

The attention of the national legislature is also called to the present faulty constitution of the Territorial courts, and the lack of proper definiteness in relation to their powers and the manner of their exercise. These courts are anomalous in character, and there appears never to have been a proper consideration of the peculiar circumstances and conditions under which they must act. The method of compelling the attendance of jurors and witnesses, of impaneling juries, the suitable compensation of marshals required to travel, in the pursuit of witnesses, jurors, and criminals, over great distances, as well as the present embarrassment attendant upon bringing witnesses from remote parts of the country—all these, with yet others, are matters concerning which the laws are faulty. The courts are of a mixed or twofold character, being at once Territorial and Federal. The organic acts of this Territory and of others declare that "the jurisdiction of the several courts herein provided for, both appellate and original, \* \* \* shall be as limited by law." The law, as said before, is not only wanting in definiteness on this subject, leaving the courts oftentimes in doubt on the question of how to proceed in Federal cases, but is so far wanting as to leave the courts to such inconvenient and embarrassing use as they may find it possible to make of the Territorial law and its machinery. In fact, what is wanted is not so much definiteness in the matter of jurisdiction as *a procedure fixed by a law of Congress, in accordance with which the Territorial courts, may proceed when exercising the jurisdiction of circuit and district courts of the United States.*

It is also worthy of consideration whether Congress, while dealing with this general subject, should not provide some system better than the present, of determining cases on appeal from the district courts of the Territory. A court wholly composed of three district judges, each one of whom may at any term of that court be interested in the decision of the other two upon cases appealed from his own court, and is not only clothed with full authority to pronounce in the higher capacity upon his former judgment, but is also able, with the concurrence of but one of the other judges, to affirm and enforce the correctness of that judgment, and is therefore exposed to the temptation of granting concurrence for a reciprocal advantage—such a tribunal, no matter how able and upright those who compose it, cannot fully meet the requirements of a supreme court.

If circuit judges of the United States having circuits to which Territories are contiguous could sit with the Territorial supreme courts as now constituted, a great gain would unquestionably be made without much additional expense, and if this be impracticable on account of the present extent of the circuits of the United States, then the creation of



a new circuit with the designation of Territorial circuit, and the appointment of a suitable person charged with the duty of sitting with each and all of the Territorial supreme courts in convenient rotation, would accomplish the object equally well.

In conclusion, under this general head, I deem it proper to urge the importance of a careful investigation of all the laws relating to the Territories, with a view to greater harmony, consistency, and adaptation to conditions. At present they are characterized in many cases by inequalities and incongruities, which plainly show that they were enacted to meet special demands, and without sufficient regard to real needs, which for the most part are common to all the Territories, and require common legislation.

Finally, I respectfully invite attention to

**THE PRESENT INSUFFICIENCY OF THE APPROPRIATIONS MADE FOR  
THE SUPPORT OF THE TERRITORIAL GOVERNMENTS.**

The salaries of public officers, in whatever branch of the service, should be fixed on the basis of two primary considerations, the character of the service to be rendered, and the legitimate cost of living under the conditions involved. This granted, it is difficult to see why a service so important, difficult and laborious as that to be performed by leading officials in the Territories, where all things—laws, institutions, public policies—need, as they will never need again, the wise and skillful molding of a careful hand, where official life is of necessity attended by many sacrifices, and where the necessary cost of living is much greater than in the older communities, should have so meager a reward as that provided for by the Federal statutes. What then shall be said of the wisdom and justice of a legislation, which during the recent years, in disregard of the necessities of Territorial officers and of their just expectations, has persisted in appropriating as full compensation sums less by 25 to 33 per cent. than the legal salary?

I cannot doubt that proper inquiry into this matter will at least result in the annual appropriation of the amounts prescribed in the statutes. It should do more—it should result in such increase of compensation in some cases as is demanded by the nature and circumstances of the service.

I have the honor to be, with great respect, your obedient servant,  
JOHN W. HOYT,  
*Governor of Wyoming.*

Hon. CARL SCHURZ,  
*Secretary of the Interior, Washington, D. C.*

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**REPORT OF THE GOVERNOR OF DAKOTA TERRITORY.**

EXECUTIVE OFFICE DAKOTA TERRITORY,  
*Yankton, November 8, 1880.*

SIR: In reply to the request from your department of August 16, for a report of the affairs and of the progress and development of this Territory for the year ending June 30, 1880, with any suggestions I might deem proper, I beg leave to say that I was not installed in office as governor of Dakota until the 24th of June last, consequently a very small period of the time mentioned has passed under my administration, and

that owing to a serious illness during September and October, I have been unable to answer your communication within the time named. The reports of my predecessor, the late Governor William A. Howard, now on file in the Interior Department, undoubtedly give a more comprehensive and accurate statement of the affairs of the Territory during the period named in your letter than any report I could make.

I will, however, endeavor to give a brief statement of the affairs of the Territory since I assumed the office, with some suggestions as to present and future requirements.

#### TRANSPORTATION.

The means of communication between the different portions of the Territory have rapidly improved during the past year. The Chicago, Milwaukee and Saint Paul Railway Company has extended new lines across the southern portion of the Territory, to a point called Running Water, on the Missouri River, and the same company has also built another line from Canton, via Alexandria and Mitchell, with the intention of reaching the Black Hills and crossing the Missouri River about one hundred miles above Running Water at a place called Brulé.

A number of prosperous towns have been built up on these new lines, and, in fact, where there was nothing but the trackless prairie a year ago, well-built towns, embracing from one to two hundred houses and places of business have been established.

The Chicago and Northwestern Railway Company has also extended its system of railroads from the western line of Minnesota to Watertown, and also, via Huron to Fort Pierre, on the east bank of the Missouri River. This company has also made close stage and transportation connections direct to the Black Hills. Thriving and prosperous towns have also sprung up as if by magic along this central line of communication. Railroads running north and crossing these east and west lines, connecting them with the Northern Pacific, are being pushed rapidly forward. The Northern Pacific now has nearly four hundred miles of its road completed in Dakota and it is understood that the last spike will be driven at the Montana line this season. This wonderfully rapid extension of railroad facilities and improving river communications has aided to settle up the Territory beyond the most sanguine expectations of the earliest inhabitants, adding, as I believe, 15,000 new settlers since the enumeration was completed, making the aggregate of white population at the present time 150,000.

#### TOUR OF INSPECTION.

During the months of July and August last I made a tour of inspection of nearly all the principal points in the Territory, passing up the Missouri River to Fort Sully, stopping at the military posts and agencies along the river. From Fort Sully I took transportation across the great Sioux Reservation to Fort Meade and the Black Hills, where I spent several weeks making a careful inspection of the mineral and agricultural resources of that rich and fertile region.

#### MINING.

I was present by invitation, and saw the reduction and smelting into bars the gold from two weeks' clean-up of the quartz-crushing mills, belonging to the Homestake Mining Combination, which was valued at

over \$150,000, showing an average annual yield of gold from 400 stamps of about three and one-half million of dollars.

The Father De Smet mines, the California, and many others produce fully as high grade ore as the mines to which I have referred, although none of them have such heavy and expensive machinery as the Homestake.

The silver mines are also being developed in many places around the hills, and there seems to be hardly any reason to doubt that the Black Hills will yield vast quantities of gold and silver for generations to come.

#### WASTE OF TIMBER.

The fine timber which grows all around the hills, belonging to government ought to be preserved, as it will be required for properly timbering the mines and for building purposes; and in order to accomplish this result, I would recommend that an agent be appointed and authorized to sell timber for mining and building purposes; also to employ men during the dry season, who live in the heavily timbered sections, to put out fires when they are first started, and to aid in bringing to justice those who set these fires through carelessness or with criminal intent. A small sum expended in thus protecting the government timber, will save millions of feet yearly, and unless something is done to stop these great fires that rage through the mountains every season, and to prevent depredations upon this valuable timber, tunneling the hills, and excavating the gold-bearing rock will come to an end, for want of timber to properly protect the miners while working hundreds of feet under these mountains. The valleys around the Black Hills are exceedingly rich, and produce all kinds of cereals and vegetables in abundance.

#### BLACK HILLS AS A SUMMER RESORT.

The scenery around the eastern and southern hills is charming, and the pure water and bracing air always to be found there during the heated term will induce thousands to quit the populous western towns, and seek the Black Hills as a place of summer resort, as eastern people seek the White Hills, in New Hampshire, whenever the railroads now being built are completed to this new Eldorado.

#### UTILIZING INDIAN LABOR.

From a casual examination of the Indian reservation along the Fort Pierre route to the hills, and also from the hills to Bismarck, I see no reason why a large proportion of the whole Sioux Reservation could not be utilized for stock raising and agricultural purposes, at least to a sufficient extent to feed the Indians now there. If a change in the policy now pursued by the government could justly be made, so that the Indians could be employed by the Indian agents at a moderate price per week, and thus utilize their labor to raise the stock and agricultural products now purchased and conveyed to them long distances at great expense, it seems to me this plan would greatly benefit the Indians and prepare them for independent action, and at the same time save large sums which the government could hold in reserve for those unfit to be made self-supporting.

If these stalwart braves can take (as some of them have been doing for the past year) from two to four horse teams, and freight Indian supplies from the Missouri River one and two hundred miles to the

Indian agencies at a fixed price per ton, would they not gladly take the same teams and drive the plow, seeder, and harvester or serve as herdsmen in care of stock for a moderate weekly payment?

There are about 50,000 square miles of Indian reservation in Dakota. Will not that land support an average of one Indian to the square mile under the agricultural system I have indicated, at less than one quarter of the present cost to the government, and leave every Indian in ten years with his land in severalty and ready to become self-supporting?

The foregoing are thoughts and questions respectfully submitted for future consideration.

#### THE WHEAT HARVEST.

At Bismarck I found that the wheat harvest had just commenced, and all along the line of the Northern Pacific Railroad from Bismarck to Fargo, the countless acres of golden wheat were falling before hundreds of self-binding harvesters, all in active operation. The average yield of wheat in Northern Dakota the present season is estimated at from 25 to 30 bushels to the acre, but in Middle and Southern Dakota, wheat has not done as well, although I am unable to find any section of the Territory where any crop has proved a total failure.

I have been unable to obtain the census report, showing what number of bushels of wheat Dakota produced last year, but I think it may be safely estimated that the crop was nearly one-third larger the present year than the census report of last year's crop shows.

Dakota number one hard wheat produces the best flour to be found in the market, and although millions of bushels are shipped away, flouring-mills are being erected all over the Territory, one of the first having recently been built at Sioux Falls, with a capacity for producing 1,200 barrels daily.

Nearly every branch of mechanical and manufacturing industry seems to be getting a good foot-hold, and the people in every section of the Territory which I have visited appeared to be hopeful and prosperous.

#### DEPREDACTIONS ON SCHOOL LANDS.

The sections of land donated by Congress for educational purposes whenever State organizations are perfected, are being depreciated in value because the law seems inadequate to prevent trespass upon them. I have called the attention of the United States district attorney and the courts to the depletion of what was intended by Congress as a sacred fund for the education of the rising generation, and have been advised that additional legislation by Congress is necessary for the protection of these school sections.

#### TERRITORIAL LEGISLATION.

The territorial legislature is altogether too small for the accumulating legislative business, composed as it is of only 12 members in the council or upper house and 24 members in the lower house. The members of both houses are elected from districts covering 75,000 square miles, now inhabited by 150,000 people, and are necessarily rather unequally distributed.

I respectfully but earnestly suggest that the number in each house ought to be doubled at the coming session of Congress.

The population and business of the Territory having increased more than ten-fold since the number was originally fixed, an increase at once

is, in my opinion, imperatively demanded in order that the people may have proper representation when measures are considered looking to the organization of one or more States from this Territory.

#### INSUFFICIENT APPROPRIATIONS.

I would also call attention to the neglect of Congress in not appropriating the amount fixed by the organic act for the salaries of the judges and other Territorial officers. These officials have to travel long distances to attend to public business in this large Territory and expenses of living in new towns is sometimes greater than in populous cities; the business constantly pressing upon the officers in the Territory is ten times more than that of some of the other Territories, while the appropriation made has been the same in all.

I trust that Congress will see that it is but a simple act of justice to appropriate the amounts fixed by law for the officers of Dakota.

#### PENITENTIARY AND INSANE ASYLUM.

Although the general government has derived large revenues from the public lands and is constantly leaving among us persons discharged from the Army and Indian agencies who become criminals and insane people, no appropriations have yet been made by Congress for the erection of an insane asylum or penitentiary, leaving an annual expense upon the people of the Territory of nearly ten thousand dollars for the conveyance of convicts to Detroit, Mich., that being the nearest point that could be secured for their safe keeping. Forty thousand dollars would build a penitentiary of sufficient capacity for the present requirements of the Territory, which sum could be saved in four years on the single item of transportation.

A temporary insane hospital was provided under Governor Howard's administration, which has served, by making additions thereto, to alleviate in some degree the sufferings of this numerous and unfortunate class. The building, which is of wood and but one story high, is now overcrowded, and applicants are waiting in jails and poor-houses for some place where they can be properly treated and cared for.

I sincerely hope Congress may be induced to appropriate one hundred thousand dollars this winter for the erection of a penitentiary and a suitable insane asylum at the proper points in this Territory. I believe almost all of the other Territories have been favored with similar appropriations.

#### FINANCIAL CONDITION OF THE TERRITORY.

The financial affairs of the Territory are getting into a satisfactory condition. Two years ago the Territorial warrants were selling at 70 cents on a dollar, and Governor Howard, in his communication to the department, expressed fear that bankruptcy would ensue; these warrants are now selling at par and we hope to be able, owing to the increased revenue from new capital which has come into the assessor's list since that time, to pay off every dollar of outstanding indebtedness by the time the legislature meets, and start the year 1881 with a clean balance sheet.

The county of Yankton has a burdensome debt hanging over it for aid extended to a railroad, and the county of Lawrence, in the Black Hills, has been loaded down with a fraudulent and unjust debt of several



hundred thousand dollars, through the manipulations of a corrupt but powerful ring. With these exceptions the financial condition of the various counties in the Territory is in a hopeful condition.

#### EDUCATIONAL SYSTEM.

The educational system inaugurated under Governor Howard's administration is being developed, and I trust will soon be placed upon a sound basis, although the lack of funds and imperfect organization has prevented the accomplishment of all that its friends anticipated. Several high schools, academies, and institutions of learning, have been founded during the past year; among these may be mentioned the Spearfish Academy, situated at Spearfish in the Black Hills.

I assisted in laying the corner-stone of this institution in July last, and the work has been pushed forward with such rapidity that the building was completed by voluntary contributions and opened for the uses intended within four months.

The location of this institution is one of the finest in the Territory, standing as it does upon a beautiful eminence just back of the town and commanding a full view for miles of the beautiful and fruitful Spearfish Valley.

#### TERRITORIAL MILITIA.

The legislature, several years since, enacted a comprehensive law, which has never been put into operation for want of arms and equipments.

The War Department has charged to the Territory large quantities of arms and ammunition drawn under Governor Faulk's administration for the ostensible defense of the Territory against Indian raids, &c., but which were really distributed to irresponsible persons who lost them, or, possibly worse, sold them to Indians.

With this charge against the Territory, the War Department has declined to furnish arms for the Territorial militia, and the law has remained a dead letter.

There are now in different portions of the Territory, independent military organizations who are anxious to be enrolled as a part of the Territorial militia, provided arms and equipments can be secured for them.

As the arms now charged against the Territory never came into the hands of the militia, it would seem but just that the charge for them against the Territory should be canceled and placed to some other account, and that the Territory be furnished with the quota designed for its organized militia, and thus enable the executive to carry out the Territorial enactments.

A reasonable number of efficient military companies located in different sections of the Territory, would be conservators of the peace and useful in case of incursions from hostile bands of Indians, and keep alive the martial and patriotic sentiments of the people.

In this connection, I am happy to add that peaceful and amicable relations have been maintained between all of the various tribes of Indians and the people of Dakota during the past year, and that, with the exception of occasional raids by small bands of young bucks or wild Indians, very few depredations upon whites have occurred.

It seems to be the policy of the principal chiefs to take their grievances against the whites before the courts and to surrender to the Indian agents for trial, in the same manner, bad Indians charged with crimes and outrages.

In conclusion, I may be permitted to add, that I have found the condition of the Territory much more prosperous than I had anticipated, and that its advancement during the coming year bids fair to far exceed any like period in the past, and I shall be most happy at any time to furnish such further information or suggestions as the department may require.

Respectfully,

N. G. ORDWAY,  
*Governor.*

Hon. CARL SCHURZ,  
*Secretary of the Interior.*

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## REPORT OF THE GOVERNOR OF IDAHO TERRITORY.

EXECUTIVE OFFICE, IDAHO TERRITORY,  
*Boise City, October 6, 1880.*

SIR: In compliance with your request of August 16th last, I have the honor to submit, herewith, a report of the condition of affairs and of the progress and development, in so far as that is possible, of the Territory of Idaho for the year ending June 30, 1880.

Owing to the fact that I have only recently entered upon the duties of the governorship, the task of preparing this report has been an exceedingly difficult and embarrassing one. There is no record showing the *status* of affairs, especially as respects the progress and development up to the year ending June 30, 1879. Consequently the advance made during the past year could, at least, only be estimated. Moreover there is no bureau or other method provided for the collection of statistics of the resources, industries, products, &c., of the Territory; nor is there any provision of law requiring local officers to respond when called upon by the governor, to furnish information relative to such matters. Under these circumstances it has not been possible to obtain complete and reliable information upon all the points about which inquiry is made.

In view of these facts I deem it best to make no attempt to show the exact progress and development of a year, but, instead, give the present condition of affairs in the Territory, with as full a statement of its resources, industries, and products, as it has been possible to obtain in the brief time I have had for the purpose.

### GEOGRAPHICAL DESCRIPTION.

Idaho Territory, sometimes called "Gem of the Mountains," lies to the north of Utah and Nevada, which form its southern boundary. It extends to the north over 400 miles to the British possessions, which, at the 46th parallel, form its northern boundary. On the east it is bounded by Montana and Wyoming, and on the west by Oregon and Washington, the wonderful Snake River forming, for a distance of 50 miles, the dividing line.

### AREA.

In area it comprises more than 86,000 square miles, or over 55,000,000 acres. These lands have usually been described as agricultural, desert, mineral, and timber lands, but the exact quantity of each kind can only be approximated. The best estimates classify these lands as follows:

Suitable for agriculture in their present state, 12,000,000 to 15,000,000

of acres; capable of being reclaimed by irrigation, 10,000,000 to 12,000,000 of acres; pasturage or grazing lands, 5,000,000 of acres (although much of the land described as agricultural is suitable and is, in fact, used for grazing); timber lands, 10,000,000 of acres; mineral lands, 8,000,000 of acres. There is at least 5,000,000 of acres, mostly arid desert, or volcanic formation, unfit for any use, being destitute of mineral, timber, or vegetation of any kind whatever.

#### CLIMATE.

In the valleys and agricultural portions of the Territory the climate may justly be designated as salubrious. The equable temperature and cool nights, the bright winter and summer skies, so common to the Rocky Mountain regions, prevail and reach perfection in Idaho. In the high mountain altitudes the winters are long and severe, but the pure, dry atmosphere renders it possible to endure them without discomfort or suffering.

#### SOIL.

The soil of the mountain regions is generally sandy and rocky; that of the lower hills and slopes, composed of decomposed granite and sandstone, produces good crops of natural grasses, and affords fine ranges for grazing purposes. The soil of the table lands is similar, with here and there rich loam intermixed, from which good crops are produced. The soil of the valleys is generally a sandy loam, rich and mellow, well-adapted to the growth of all kinds of grain, fruit, and vegetables.

#### RIVERS, SCENERY, ETC.

Though one of the largest and most interesting of the Territories, Idaho is probably the least known. It abounds in swift, noble rivers, beautiful, placid lakes, grand scenery, and fertile valleys, while its rugged mountain ranges are filled with the precious metals—an Eldorado indeed!

The principal rivers are the Snake, Salmon, Boise, Clearwater, Kootenai, Bear, Malad, Raft, Payette, and Weiser, all clear, strong streams, grand currents, worthy of their mountain sources. These streams, and all others in the Territory, are well stocked with the most palatable food fishes—trout, salmon, white, and numerous other species. To the tourist, the pleasureseeker, the scientist, and the sportsman, the Territory presents distinctive and attractive features not excelled elsewhere on the continent. It is not possible to mention even the chief points of interest, but it may not be amiss to note the fact that Idaho has one of the greatest cataracts in the world, the great Shoshone Falls of Snake River, equal in height and volume of water to Niagara, and far exceeding it in beauty and grandeur of natural scenery.

Wild game of all kinds is abundant, and the sportsman cannot fail to find, in the way of the pleasures of the chase, or the exercise of the angler's art, all that the most exacting disposition could demand. The invalid will find the waters of the numerous mineral springs very beneficial and invigorating. Here the scientist can study the most wonderful of nature's phenomena, and speculate to his heart's content.

#### AGRICULTURE AND FRUIT.

The number of people engaged in the pursuit of agriculture is unknown to me; but I think it entirely safe to state that at least one-third

of the population are farmers and ranchers. The past year has been a remunerative one for this interest; good crops have been raised, and high prices generally obtained therefor. As before stated, not to exceed 15,000,000 acres of the total area of the Territory are suitable for agriculture in their natural state.

The principal agricultural settlements are in the counties of Ada, Cassia, Bear Lake, Nes Percé, Oneida, and Washington, though every county contains fertile lands, small valleys, where there are families and settlements engaged in agriculture.

In the northwestern counties adjoining Washington the rainfall during the growing season is usually sufficient to insure good crops, and artificial irrigation is seldom resorted to. Elsewhere in the Territory crops can be raised in that way alone. Where the supply of water for irrigating is abundant, the soil produces excellent crops of all kinds of grain and vegetables. It is no exaggeration to state that, with the one exception of corn, a better quality of grain cannot anywhere be produced. Wheat yields readily an average of 40 bushels to the acre, and in Western Idaho 65 to 70 bushels is not infrequently the average. Oats average 60 to 70 bushels to the acre, and barley 30 to 40. Hay of good quality, timothy and clover, is grown. Vegetables are of excellent quality, and large in size.

Fruit trees and vines grow very rapidly and produce prolifically. Idaho apples, pears, peaches, grapes, nectarines, apricots, and berries are justly celebrated for their superior size and luscious quality.

I greatly regret that it has not been possible to obtain a statement showing the products of the soil during the past year, and the value thereof, as I feel satisfied the exhibit would prove gratifying to all persons interested in the welfare and prosperity of the Territory. That this interest is larger than ever before, and that it will continue to increase rapidly, there can be no doubt, now that experience has demonstrated beyond controversy the adaptability of climate and soil to the purposes of agriculture. It is not long since the opposite view very generally prevailed.

Those who wish to avail themselves of the pre-emption or homestead laws, to secure homes on the public domain, can find vacant tracts in almost any of the desirable valleys.

In the Boise City land district the land taken up under the different laws for the disposal of the public lands and upon which final proof has been made amounts to 92,081 acres. The lands upon which claims have been initiated under said laws, about 400,000 acres.

This statement does not include settlements upon unsurveyed lands, but granting that the amount of such lands settled upon is equal to or greater than the amount shown in the above statement, it will be seen that but comparatively a small portion of the government lands in Idaho has been settled upon or disposed of.

There are large tracts of unoccupied government lands within the Boise City district quite as good as any that have been disposed of. Big Camas Prairie, containing over 100,000 acres, particularly well adapted to wheat-growing, would be a desirable locality for the settlement of large colonies. The valleys of Wood River also present admirable advantages for such settlements. Twenty-five hundred families could find good homes in these two localities. Their nearness to what bids fair to be the greatest mining district of the West, would insure a good market, where ready sale, at high prices, would be found for all the products of the soil.

Little Salmon Meadows, Indian and Long Valleys, in the northern

portion of the Territory, will afford good homes for at least two thousand families, while on the Weiser and Payette Rivers there are still large bodies of unoccupied land of an excellent quality.

In the Oxford land district about 85,000 acres were entered and disposed of from September 1, 1879, to June 30, 1880. The whole number of acres entered and disposed of in the district since the organization of the Territory is 342,178.

The building of the Utah and Northern Railroad through Eastern Idaho has been a great benefit to that portion of the Territory. The population has increased rapidly, and thriving, enterprising towns have grown up where but a short time since silence and desolation reigned supreme.

The line of the government surveys should be extended over the lands in Lemhi and Lost River Valleys. There are large settlements in those valleys (in many instances on unsurveyed land) with farms well fenced, the land under a good state of cultivation, and with good substantial houses for residences. Settlement is greatly retarded in many places by the failure to survey the land, as no one desires to settle upon and improve land for which he cannot at once initiate a claim under the pre-emption or homestead laws. I would suggest that the appropriations for the survey of government lands in the Territory should be largely increased. The policy, so often resorted to of late, of making settlers in an unsurveyed locality contribute the amounts necessary to have their claims surveyed is small business for a great nation like ours to engage in. There should never be necessity for such expedients. The public domain should be surveyed as rapidly as possible, so that settlers may initiate their claims immediately upon settling thereon. The policy of making small annual appropriations, sufficient usually for the survey of about one township in a district, is not economy.

#### STOCK-RAISING AND GRAZING.

This is one of the most considerable interests in the Territory. Experience has demonstrated its advantages as a grazing region, and the number of persons engaged in the business of stock-raising and grazing is very large. Here, again, the absence of statistics makes it impossible to do full justice to the subject.

The ranches are large, well watered, and covered with "bunch" and other nutritious grasses, indigenous to the soil. Stock men have devoted themselves to the raising of cattle; wool-growing having received but little attention, as yet, though the climate and soil are admirably adapted to that purpose. During the summer months cattle, sheep, and horses range on the foot-hills and lower mountain slopes. In the winter they are driven to the ranges in the valleys, where the temperature is mild and snow seldom, if ever, falls. Provision is, however, always made to meet exceptional winters, which occur not oftener than once in five years. For these, hay is cut from the natural meadows and stored upon the ranches. An excellent quality of beef is raised without resorting to stall-feeding or the use of prepared food. While it is impossible to give the number and value of the stock raised and owned in the Territory, good judges estimate that not less than 40,000 head of Idaho cattle have been sold and driven from the Territory to Wyoming and other points east and west during the past season. This estimate is probably under rather than above the exact number sold. The value of this stock would exceed \$500,000.



The mineral resources of the Territory constitute its chief interest, the one upon which all other interests are largely dependent. It is to the discovery of gold and silver on the Pen d'Oreille in the year 1852, and subsequent rich discoveries elsewhere of the precious metals, that we are indebted for the organization of the Territory, which was formed in 1862, with its present boundaries.

The occupation in those days of a large portion of the Territory by hostile Indians rendered prospecting a dangerous undertaking, and prevented any very general exploration of the country. Many of the mines first discovered were soon worked out, and a large portion of the mining population, unable to prospect with safety in Idaho, left the Territory to seek in other and more recently discovered mineral regions the fortunes they had failed to find in this. From these causes combined the mining interests of the Territory received a severe check, and the development of its mineral resources was greatly retarded. But prospecting and exploration did not cease entirely, and though development has been slow, it has been, nevertheless, certain. New and important discoveries of mineral ledges and placer deposits have been made from time to time until now there is scarcely a county or section in the Territory that does not contain one or more mining camps or towns.

Of recent discoveries perhaps the most important are those known as the Salmon River and the Wood River districts—the former in Lemhi County, and the latter in Alturas County. •

The latter is the banner county in the way of new discoveries, and although in neither the Saw Tooth or Wood River districts have the lodes been explored to great depth, enough has been accomplished to show the existence of a mineral belt 55 miles in length and 10 miles in width, carrying large quantities of the finest ores. Both mining experts and practical miners agree that all the indications are favorable to the view that the lodes go to "the deep," and that the development already made is sufficient to assure their permanency. North of what is known as the Wood River Divide the lodes contain silver ores, principally native, ruby, brittle and sulphurets of silver. South of the divide the veins are large and fine, with silver bearing galena, carbonate, sulphate, molybdate, antimonate, arsenate, and chloride of lead, and grey copper ores. With the advent of next spring it is believed stamp-mills and smelters will be erected for crushing and smelting the ores of these splendid mineral districts. With these and increased facilities for the transportation of the ore and bullion produced, and the bringing in of needed supplies of all kinds, the bullion production of the Wood River region is likely to equal that of all other districts of the Territory. Of the noted claims in this region, mention may properly be made of the Bullion, Ophir, May Queen, and Evergreen in Mineral Hill, all the property of the Wood River Gold and Silver Mining Co. In the lower Wood River County there are two camps, known as Jacob's and Callahan's. Many locations have been made in these districts upon which considerable work has been done. Shipments of ore have been made to Salt Lake City which average from \$150 to \$200 per ton. The ores are galena, easily smelted, carrying from 40 to 60 per cent. lead and \$80 to \$250 in silver.

In the Warm Springs Creek district several good mines have been discovered. The "Idaho," located in 1879, contains a large body of antimonial silver, assaying \$80 to \$200 per ton. Adjoining the Idaho is the Wood River mine, in which a good body of ore has been exposed, assaying \$150 per ton. The Black Horse mine contains a good quality

of galena ore. The mines of the Upper Wood River district are similar in character to those of the Middle and Lower Wood River districts. Many locations of great promise have been made. A thriving town called Galena City has sprung up, and everything promises well in the district. The mineral belt in this district seems to be a network of veins, with prominent croppings often traceable for thousands of feet.

Many fine towns have grown up lately in the Wood River country, among the most important of which are Bellevue and Ketchum.

In the Saw Tooth district a large number of valuable claims were located in 1879, and many more have since been discovered and located. The famous Pilgrim mine, recently sold to San Francisco parties at a high price, is located in this district. Of other mines of a prominent character the best known are the Lucky Boy, the select ores from which carry \$10,000 in silver per ton—the Vienna, the Emma, Ruby Lion, Columbia, and Custer.

The Caribou district, situated near the eastern border of Oneida County, was at one time the scene of a great mining excitement. Large placer deposits were discovered, and for a while yielded largely. Placer mining is still followed to some extent, but the wealth of the district lies in its auriferous quartz lodes.

#### MINES OF THE SALMON RIVER.

The rich discoveries in Bay Horse district, on the Salmon, has extended the reputation of the district far and wide. It is seldom that an ore body is found of the magnitude of that known to exist in the General Custer mine. The development in this mine some months ago was sufficient to expose to view more than three million dollars. That is the estimated value competent experts placed upon the ore then in sight. The Charles Dickens mine, discovered in 1875, is another of the valuable claims in this district. In one month after the mine was discovered the owner pounded from top rock with a hand-mortar \$11,000. In 1878, with an arastra run by water-power, over \$32,000 were taken out of the mine in six weeks. Another of the famous mines of this district is the Montana, which has been self-supporting since its discovery, and for this reason has been styled "the Poor Man's mine." The vein varies from five to fourteen feet in thickness, from which the ore taken averages from \$500 to \$1,700 per ton. The quartz carries gold and horn silver. There are many other valuable mines in this district, among which may be mentioned the following as having a good reputation: The Unknown, Mount Estes, Lucky Boy, Badger, and Charles Wayne. Placer mining is also a large interest in this district, and many valuable claims are being worked with good results. Among the best of this class of claims are those known as the "Morrison" and the "Bray."

There are a number of fine placer claims in the Stanley Basin district, and the annual yield of gold from this district is not less than \$30,000. Deposits of cinnabar have also been found here, the only place where it has been discovered in the district.

Ten miles from Challis City is the Bay Horse district, which is also deserving of special mention, as within its limits every conceivable grade of ore is found, the smelting ore being exceedingly rich. Chief among the mines of this district are the Ramshorn, Beardsley, Hood, Vermont, and Bull of the Woods, all producing handsomely. At Poverty Flat, a portion of this district, are the Silver Bell, Mono, Ella, and the Redemption, the latter being at this time regarded as an exceptionally fine prop-

erty. On the East Fork is the Germania, also a good mine. The placer between East Fork and Yankee Fork, are also yielding handsome returns.

The mines of the Salmon City region produce free gold ore, from which \$15 to \$40 per ton are extracted. The Ranger, Eldorado, California, Freeman, and Shoo Fly, are all good mines, from which ore in paying quantities is being taken. From the placer mines in the Leesburg, Moose Creek, Arnets Creek, Kertley Creek, Gertson Creek, and Bohanan Creek, the annual yield of gold is not less than \$200,000, and judging from present indications are likely to keep up production at this rate for twenty years, or longer.

In the Prairie Basin district, valuable discoveries have been made of very high grade ores, but owing to difficulty of access the district has not produced much ore. This disadvantage will be overcome shortly, and it is believed the district will become a valuable one. The same remarks apply to the Yellow Jacket district, where immense deposits of ore have been found. The North and South America mines situated in this district, are regarded as valuable claims.

The facilities for working and handling the ores of the Salmon country are rapidly increasing. The Omaha smelter in Bay Horse district, recently completed, in a run of two weeks produced from the ores of the district \$60,000 in bullion, and the managers are well satisfied this average can be maintained for an indefinite period.

A smelter erecting at Clayton, in the Kinnikinick district, will be in operation in a few days. Two new stamp-mills are going up in the Yankee Fork district; one sixty-stamp mill at Bonanza City and a ten-stamp mill at Custer City. Two arrastras have been in operation in this district during the past year, and by this primitive method over \$100,000 in bullion has been produced.

Fifteen miles from Salmon City is the twenty-stamp mill of the Eldorado and Ranger. On Moose Creek there is a five-stamp mill at work on the ores of the "Shoo Fly" mine; at Gibbonsville a ten-stamp mill and at least ten arrastras operating on the gold ores of the North Fork district.

The Yellow Jacket district has a three-stamp mill in operation.

It is estimated that with improved facilities for transportation, sure to be obtained soon, the mineral output of the Salmon country will reach \$500,000 per month, without increasing present facilities for smelting and crushing the ores.

Placer mining is, and has always been, a feature in Idaho. Perhaps the most extensive field for this industry in the future will be the bars of Snake River. Throughout almost its entire length these bars contain vast deposits of what is called "flour gold." It was not until recently that any method had been invented for saving these fine particles. With the process now employed of washing the dirt over silver-plated copper plates, coated with mercury, the fine gold can be saved in paying quantities. The machinery is simple and the bars can be worked on an extensive scale with but slight cost.

In Ada County very little has been done the past year toward developing the mines located in the northern part of the county. Coal beds, and rich deposits of the finest quality of fire and pottery clay, have been discovered, but up to the present time nothing has been done to develop them.

In Boise County some very promising quartz lodes have been discovered within 10 miles of Boise City. The ore will probably mill from \$15 to \$20 per ton, requiring economical working and a first-class mill

of large capacity to leave a margin for profit. The Elmira Company in Banner, and the Gold Hill Company in Quartzburg, have been steadily at work, and both have realized large profits. Placer-mining in this county has again declined, and a large majority of the claims are now only worked successfully by Chinese.

Owyhee has not wholly recovered from the blow received in 1876. A smelter is erecting in South Mountain, which, when completed, will give the poor owners of mines a chance to sell their ore at a profit, and tend to prosperity in the future.

In Atlanta the Buffalo Company has struck the richest ore body ever encountered in their lode, and in Rocky Bar increased activity is also perceptible.

In closing this portion of my report I desire to add that I am satisfied complete justice has not been done to the wonderful mineral resources of the Territory. That there are mineral districts not mentioned in these pages, there is no doubt. That there are better mines in many of the districts than those named herein is quite likely, but I have not been informed respecting them, and have alluded to such only as I have been assured by reliable parties would bear out the statements made respecting their value.

Since the first discovery of gold and silver in Idaho, the Territory has contributed from its mines to the material wealth of the country not less than \$75,000,000,

The output of the mines for the past year may not exceed \$3,000,000. This is not a large increase over last year, but significant in connection with the fact that from 1867 up to last year the production was constantly decreasing.

From present indications the production for next year will equal, if not exceed, any year of the palmy days prior to 1867.

#### INDIAN AFFAIRS.

There have been no disturbances during the past year with the Indians—no depredations by them, and the people have enjoyed unusual security in pursuing their avocations, even in those portions of the Territory most exposed to danger.

During the Bannock war about thirty of the Sheep Eater and Weiser Indians escaped from the troops, and secreted themselves in the rugged and almost inaccessible mountains of the Salmon River, from whence they raided remote and unprotected settlements, murdering several citizens in the spring of 1879.

General Howard took prompt action to relieve the people from their danger, sending two companies of troops in pursuit of these treacherous savages, and after a long and toilsome chase, lasting all summer, finally succeeded in capturing the band late in the fall of 1879. They were taken to Fort Vancouver, where they still remain. Fearing, however, that some of the band might have escaped their pursuers, a detachment of scouts, with Indian guides, under command of Lieut. Farrow, was sent out during the past summer to scour the Salmon Mountains. All the old hiding places were visited, and after a thorough and vigilant search Lieut. Farrow's command has returned without having seen any hostile Indians. The fact that no settlers have been murdered or depredations committed during the past year is regarded as conclusive evidence that all of the cruel and murderous Sheep Eaters were captured last year. It is to be hoped they will be kept where they can do no further harm.

The Salmon county has long been known to be rich in precious metals,



but the hostile character of the Indians who infested that region for years, kept the prospectors out. The past summer, the Salmon Mountains have been filled with prospectors, who have pursued their explorations without fear of molestation. The capture of the Indians, and their detention elsewhere, has given security to the miner and prospector, and the result has been the opening up of one of the richest mineral portions of the Territory.

The Nez Percé and Bannock wars created so much distrust and hostility toward the Indians, that the reservation Indians, either from fear or a disposition to observe more sacredly treaty obligations, have remained upon their reservations.

So long as the Indians are permitted to maintain tribal relations, and reservations are set apart for their exclusive use and benefit, they should be confined more closely and strictly to the reservations. Large parties of these Indians roam over the Territory almost incessantly, hunting, fishing, and begging. The appearance of these parties in remote and isolated settlements of the Territory, creates an uneasy feeling in the minds of the settlers. They are apt to regard such visits as dangerous to their peace and security, and acting upon their suspicions, drive the Indians away by force if necessary. From such collisions come long devastating Indian wars. The people of Idaho have suffered so much from the cruelty, hatred and treachery of the Indians, that it is not surprising they have little faith in the professions of friendship made by their old enemies.

Long prior to the time when the Fort Hall Reservation was set aside for the Bannock Indians there were numerous settlers upon portions of the territory selected, who still remain within its boundaries. This fact may cause trouble, and I would suggest that those settlers be paid for their improvements, and removed, or a stipulation made with the Indians by which that portion of the reservation settled upon by whites might be ceded to the government. The latter would be the best course, as the reservation, originally intended for the Bannock and Shoshone tribes, has never been occupied by the former, and contains a much larger area than is needed for the one tribe. I think the Indians would readily consent, upon reasonable terms, to the restoration of a large portion of the Fort Hall Reservation to the public domain.

The majority of the Bannock Indians west of the Rocky Mountains are under Tendog, and have a reservation in Lemhi Valley. They have always refused to go upon the Fort Hall Reservation, and spend most of their time hunting east of the Rocky Mountains with other friendly tribes. It is hardly possible for them to make a living on their reservation in Lemhi Valley, and I am informed they would gladly consent to a transfer to the reservation of a friendly tribe east of the Rocky Mountains.

The Nez Percé war depleted the ranks of that tribe, happily eliminating the nomadic portion, and instilling into the minds of the remainder a disposition to remain at home and endeavor to earn a living by farming and pasturage. Many of these Indians are now thrifty farmers, and are doing far better than when their main dependence was in hunting and fishing. It is my opinion that the members of this tribe could be prevailed upon without difficulty to select land in severalty. If this were done, a large portion of their reservation could be restored to the public domain. The Nez Percé Reservation embraces a large area of very valuable agricultural land that ought to be opened up to settlement. The policy of placing the Indians upon the same footing as white men, with respect to the right to enter and own land, is a wise



one, as tending towards their civilization, and the opportunity now presented of proving the wisdom of that policy should not be neglected.

Recently trouble has been apprehended with the small tribe known as the Shoshone or Duck Valley Indians, who live on the line between this Territory and Nevada. Prior to the settlement of the Bruneau Valley these Indians spent the winters there, and claim the right to do so now. The settlers have secured title to their lands from the government, and of course the Indians can have no valid claim to the lands. The Indians have recently appeared in the Bruneau Valley, causing much apprehension in the minds of the settlers, who fear trouble with them. Colonel Parnell, in command at Fort Boise, has orders to investigate the affair, and the Indians will, no doubt, be induced, without a conflict, to return to their own grounds. They should, however, be compelled to remain upon their reservation. If they go again into the Bruneau Valley, asserting a right to the land, the settlers may not be as patient and merciful as they have been in the past.

Upon the whole it may be said that the people have enjoyed a year of unusual peace and tranquillity with the Indian tribes of the Territory.

#### TIMBER.

The forest areas of the Territory have been variously estimated at from 8,000,000 to 10,000,000 acres. The latter estimate is probably more nearly correct than the former. There are considerable bodies of timber along the rivers and smaller streams, but the great forests are in the mountains. These consist largely of pine, fir, and cedar.

In order to obtain fuel and timber for domestic purposes, a majority of the citizens of Idaho are compelled to constantly violate the provisions of the act of June 3, 1878. It is not possible for each individual citizen to go into the mountains and procure his own lumber and fuel; nor is it possible for each person to appoint an agent to do this for him. The timber is found in the most inaccessible mountain ranges, to reach which and bring it out necessitates the building of wagon-roads, often at considerable cost.

The people of Idaho obtain their supply of fuel and lumber from men who engage in the business of cutting wood and manufacturing lumber. Saw-mills have been erected at various points, and it must be admitted that the owners of these mills do not, in all instances, insist upon having instruments in writing, designating such owners as agents of the parties to whom they sell a bill of lumber or load of fuel.

The law of 1878 should be amended so as to provide for the survey and sale of the timber on the public lands.

I would suggest that only alternate sections be sold, every other section being reserved by the government, and a heavy penalty attached for cutting or destroying the timber on such sections.

In this way the wants of the people could be easily supplied, and an interest created that would prevent the wanton destruction of timber, which the present law does not do.

#### POPULATION.

The inland and isolated situation, and the want of easy communication to its borders, have prevented a rapid increase of population in the Territory. The building of the Utah and Northern Railway through Eastern Idaho has had the effect to largely increase the population of that section, and has added greatly to its prosperity.

By the census of 1870, the population of Idaho was given as 20,588. The census of 1880 gives the Territory a population of nearly 40,000 (including Indians)—an increase of nearly 100 per cent. in ten years. Judging from the present outlook, it is not unreasonable to expect that, before the end of the decade upon which we have just entered, Idaho will have a population sufficient to entitle it to admission into the sisterhood of States.

#### RAILROADS.

There is at present but one railroad in the Territory, the Utah and Northern—a very lively protégé of the Union Pacific Railway Company. The road is a narrow-gauge, but a first-class one in every respect. For a new line the road-bed is in splendid condition, and there is no railroad in the country, unless it is the parent line, excelling it in equipment, rolling stock, station-houses, &c. The Pullman sleepers run upon this road are models of beauty, elegance, and comfort.

Other lines have been projected to various points in the Territory, the most important of which is the proposed line from Ogden, Utah, to some point on the Pacific coast in the State of Oregon. The engineers of the Union Pacific Railway Company are now engaged in making a working survey for the purpose of demonstrating the practicability of the proposed route. This line, if built, will pass through or near Boise City, the capital of Idaho, and will not only open up an immense region to settlement and traffic, but will also bring New York City several hundred miles nearer Yokohama than the present route.

#### STAGE LINES.

The Utah, Idaho and Oregon Stage Company run daily stages from Boise City, Idaho, to Kelton and Winnemucca, on the Central Pacific Railroad, connecting at those points with through trains east and west. The same company runs a daily line from Boise City to Walla Walla, the Dalles, and other points in Oregon and Washington Territory. The coaches, stock, and “home stations” of the company are excellent, and every attention is paid by its agents and employes to the comfort of passengers.

There is also a first-class stage line from Blackfoot, on the Utah and Northern, into the Wood River country, connecting with a line from Rocky Bar to Boise City. It is not possible to mention all the stage lines, but, as most of the travel in the Territory is by stages, good lines have been established wherever there is necessity for them.

#### DESERT LANDS.

As has been elsewhere stated in this report, at least one-half of the land in Idaho suitable for agriculture cannot be made available in its present state. There are large tracts lying along the Snake River which can be reclaimed by means of canals taken from that stream. The expense attending an undertaking of that nature is too considerable to admit or insure of its being done by individuals.

The amount of land one person may enter under existing laws is insufficient to induce investments in irrigation schemes on a large scale. Nor can it be expected that an enterprise which will not pay one man to undertake alone will prove more attractive to a number. The amount of land a company composed of ten or twelve persons could secure

under present laws would not excite the envy of the most rampant communist.

The desert-land act should be amended so as to permit the disposal of this class of lands in unlimited quantities, at a small price, to individuals or corporations who will pledge themselves to the building of canals for their reclamation. Proper restrictions should be made prohibiting the withdrawal of the lands from the market, and the maximum price at which they might be sold should also be fixed. These features, if incorporated in the act, would preclude the possibility of monopolies growing out of the sale of large tracts to one person or company. A much more simple method of bringing these lands into market would be for Congress to make the necessary appropriations for building canals. The lands could then be disposed of to actual settlers under existing laws. If these lands were situated in any one of the States, Congress could easily be prevailed upon to appropriate millions for their reclamation.

I very earnestly suggest that some plan, other than the doubtful expedient of artesian wells, be early adopted for reclaiming and bringing into market the desert lands of the West.

#### PUBLIC SCHOOLS.

The total number of school children in the Territory between the ages of five and twenty-one years is about six thousand. The annual revenue for school purposes raised by taxes, fines, &c., in the several counties, is about \$25,000.

Under the laws of the Territory each county has the exclusive benefit of its own educational resources and receives no aid from the Territory. The only source of Territorial revenue available for school purposes is the money which might come from escheated estates, which is too small to enter as an item in the account.

The 16th and 36th sections in each township given for school purposes, under the general laws of the United States, are unavailable for the Territories, as by these laws the proceeds of such lands were set apart as an irreducible fund to be kept until the Territory becomes a State. The duty of providing for schools in the Territories has often been urged upon Congress, and bills containing provisions looking to this end have been introduced from time to time, but as yet with no tangible result. As a matter of justice, Congress should give to the Territories portions of the public lands other than the 16th and 36th sections, which are unavailable, or should make appropriations of money for the purpose.

Under present circumstances there is not a county in the Territory that can raise by taxation a sum sufficient to keep up the public schools during the year, and in some of the counties the money from this source is totally inadequate even for a few months in each year.

All the money raised for school purposes is strictly and economically applied to the maintenance of schools in accordance with the laws, no portion of it being allowed to be paid either to the Territorial or county superintendents.

The Territorial controller is *ex officio* superintendent of public instruction, but for this service he is paid nothing, and his sources of information with regard to the condition of the public schools are restricted to the reports of the county auditors, which are generally meager and unsatisfactory, for the reason that these officers all act, so far as schools are concerned, in an *ex officio* capacity, and without pay for this branch of their service. With an appropriation of Congress these defects in

the present system could be cured, and, besides promoting the cause of education in the Territories, provision could be made for the collection of statistics and information concerning schools, a want which at present it is impossible to meet.

#### CONCLUSION.

In drawing this report to a close I am painfully aware of its imperfections; still, enough has been stated to show that the affairs of the Territory are in a highly satisfactory condition. Good health has prevailed during the year; agriculture, stock-raising, and mining have prospered, and all are in a more flourishing condition to-day than ever before. In no material interest has there been any retrograde movement in the Territory.

It is gratifying to note improvement in the public schools. The increased interest manifested by the people in the schools is a sure indication that they are recognized as important factors in building up a community of law-abiding, liberty-loving, intelligent citizens.

The administration of justice has been good, and the interest of the government and Territory cared for with economy and fidelity.

Crime is not more common than in the older communities of the East, and with one exception, infractions of the law meet with as sure and speedy punishment. The one exception noted is the utter failure, or inability, of the officers of the law in two counties of the Territory to punish violations of the anti-polygamy law passed by Congress in 1862. Bear Lake County is populated almost exclusively by Mormons, and in Oneida County this sect claims to have a majority. I am informed that in those counties many persons are living in open, undisguised violation of the anti-polygamy law, and that polygamous marriages are by no means infrequent. Unless it be the intention of Congress to hand over to priestly domination the Territories of Arizona, Idaho, Wyoming, and Utah, with perhaps one or two of the States of the Pacific slope, and permit the setting up in those Territories and States of a system that prevails nowhere else in the civilized world, then the law of 1862 should be amended so as to make it effectual; otherwise, it should be repealed, and full license given this "peculiar people" to practice their barn-yard system. A residence of some years in Utah has convinced me that kindness and leniency are wasted in dealing with this question, and that the practices in the Territories under the guise of religion which disgrace us as a nation can be eliminated only by adopting the most radical and rigorous measures.

I am indebted to the following gentlemen for valuable information compiled in these pages: Hon. J. B. Miller, Hon. M. Kelly, and Hon. Jos. Perrault, of Boise City; Hon. T. F. Singiser, of Oxford; Col. G. L. Shoup, of Salmon City; Messrs. Colvin and Viar, of Challis; Hon. A. Walters, superintendent of the assay office, and to Judge W. F. Anderson, of Bonanza City, whose valuable map of Idaho supplies a want long felt.

JNO. B. NEIL,  
*Governor of Idaho.*

Hon. CARL SCHURZ,  
*Secretary of the Interior.*

REPORT OF THE GOVERNMENT DIRECTORS OF THE UNION  
PACIFIC RAILWAY COMPANY:WASHINGTON, *December* 16, 1880.Hon. CARL SCHURZ,  
*Secretary of the Interior:*

SIR: The Union Pacific Railroad Company entered into articles of union and consolidation of the Union Pacific Railroad Company, the Kansas Pacific Railway Company, and the Denver Pacific Railway and Telegraph Company, January 24, 1880.

Since which time a deed of conveyance, as of the same date, has been made by each of the respective companies, to the consolidated company, viz, Union Pacific Railway Company, which has been spread upon its records, and ordered to be sent for registration in the different counties of the States and Territories, in which the real estate of the company is situated.

This deed conveys the entire "lines of railway and telegraph, with all their appurtenances, including right of way, station-houses, rolling stock, and all other property of every kind, connected therewith; also all the lands severally owned by the respective companies, and all that said companies may be entitled to by acts of Congress, or in any other way, intending to convey all lands wherever situated, and all rights of land of whatever kind or nature, legal or equitable, also all property rights, choses in action, and every other matter or thing described in article No. 8 of the articles of union and consolidation; also all other rights, privileges, and franchises, property of every kind, nature, and description."

A copy of the articles of union and consolidation has been filed in your department by the Union Pacific Railway Company, but the government directors, that you may have consecutive information, herewith attach a copy of same to their report.

After the consolidation the question arose as to the jurisdiction of the government directors over the consolidated property, and at a meeting of the board of directors of the Union Pacific Railway Company, held in New York January 26, 1880, the following record was made:

"President Dillon stated that a question had been made as to the legal effect of the consolidation upon the status of the government directors in the new company. He was not prepared to decide this question; the law fixed it one way or the other, and this could not be changed by any action of the company, and he recommended that the question be postponed until the annual meeting, and that meantime our counsel be instructed to give his opinion on the subject. The recommendation of the president was unanimously adopted."

Upon the raising of this question you were communicated with by Government Director Niles, who asked you if you were not entirely clear in your own opinion as to the extended jurisdiction of the government directors over the consolidated company to refer the matters to the Attorney-General, for his opinion, and upon such reference the government directors understood the opinion of the Attorney-General to be favorable as to their extended jurisdiction over the consolidated company.

No official notice was given by the Union Pacific Railway Company to the government directors to attend the meeting of its board, held in New York March 9, 1880; but as that was about the usual time for holding the annual meeting of the board of directors of the Union Pacific Rail-



road Company, the government directors met by their own appointment on the 8th of March, in the city of New York, and ascertained by telegraphic communication with the railway company's office in Boston no meeting of the board was to be held there, but that a meeting of the Union Pacific Railway Company's board was to be held in New York on the 9th, which meeting the government directors attended, and the following record was made:

President Dillon remarked that he had conferred with the company's counsel in regard to the status of the government directors, and that it had been decided to admit them to the direction of the company under protest, a protest not of hostility, but merely of protection formally expressed, in order that the action of the company might be right in the premises.

Since which time, the government directors have been duly notified to attend the meetings of the board of directors, and no farther question of jurisdiction has been raised, until, in an interview with President Dillon the latter part of July, preparatory to the inspection of the road, transportation was asked for over the consolidated roads, when the jurisdiction of the government directors was again denied and official transportation respectfully refused over any part of the consolidated roads, except the former Union Pacific Railroad, from Omaha to Ogden, thus making an issue with the government that calls for judicial settlement.

This report will therefore be confined principally to the line of railroad from Omaha to Ogden, that being the only part of the line of road the government directors have inspected this year. References will be made to the executive and operative management of the consolidated roads, so far as the government directors have had opportunity of examining same; also to the stock basis upon which the consolidation was made, and all other items of interest that have come under their observation.

The consolidated company is operated in two divisions. The Union Division, comprising the road from Omaha to Ogden, formerly known as the Union Pacific Railroad; and the road from Kansas City to Denver, formerly known as the Kansas Pacific, with the Leavenworth branch, and the road from Cheyenne to Denver, formerly known as the Denver Pacific. The two roads comprising the Kansas Division.

The executive and general operative management of the company comprehends both the Union and Kansas divisions, and is extended over some of the branch lines of railway owned by and in the interest of the consolidated company; the expense of which is distributed on a mileage basis, or on the basis of the earnings of the divisions or branches. This is an equitable distribution. In all other respects the roads are managed as independent lines of railway, each division paying all its obligations incurred in its purchase and use of materials, and in its operation; and the earnings of each division are kept separate.

The branch lines of railroad, aside from the mileage, estimated to them, in their favor to foster them, of one and a half miles to one mile of the main line of the road, in making up their prorate, of a rate charged, for business given to or received from the main line, are operated and managed as distinct lines of railroad.

This branch system of railways now comprises the—

	Miles
Omaha and Republican Valley Railroad, length.....	145
Omaha, Niobrara and Black Hills Railroad, length.....	48
Saint Joseph and Western Railroad, length.....	252
Marysville and Blue Valley Railroad, length.....	38
Colorado Central Railroad, length.....	164
Summit County Railroad, length.....	20
Wyandotte and Enterprise spurs, length.....	4
Fort Russell and Almy spurs, length.....	11

	Miles.
Utah and Northern Railway, length .....	304
Carbondale Branch, length .....	32
Junction City and Fort Kearney Railroad, length.....	70
Solomon Branch Kearney Railroad, length.....	57
Salina and Southwestern Railroad, length.....	36
Denver and Boulder Valley Railroad, length.....	27
Golden, Boulder and Caribou Railroad, length.....	6

Making..... 1,242

Which, with the—

Union Division.....	1,042
Kansas Division, main line.....	639
Kansas Division, Leavenworth branch.....	34
Kansas Division, Cheyenne branch .....	106

Making together..... 3,084

miles railroad, with the Wyoming, Montana, and Pacific Railway, and the Julesburg line (building), the Utah Central, Utah Southern, and Utah Southern extension; the latter now in operation to Frisco, Utah Territory, 250 miles south of Salt Lake, and their connections, making about 400 miles of additional railroad that is largely owned in the interest of the Union Pacific Railway, and whose traffic largely contributes to increase its earnings.

The Julesburg line is being constructed from Julesburg to strike the Denver Pacific at a point about two miles south of Evans Station, and is being built under the Colorado Central Railroad charter. Fifty-three miles of track have been laid, and owing to the extreme cold weather the work has been suspended for the winter.

Branch lines connecting with the Union Division have been built during the year as follows:

	Miles.
Valparaiso to Lincoln .....	20
Lost Creek to Albion .....	33
Grand Island to Saint Paul .....	24
Echo to Park City .....	29
Extension of Utah and Northern Beaver Cañon to Dillon .....	76

The Burlington and Missouri River Railroad, in Nebraska, have extended their line of road to and across the Union Division at Columbus and Central City.

The Elkhorn Valley Railroad, being built in the interest of the Chicago and Northwestern, is now open, and trains are running to Fremont, a station on the Union Division, 47 miles west of Omaha.

The government directors, with one exception, have gone over the line of the Union Division, and are pleased to note a continued improvement, of the line of road. One hundred and seventy-two miles of steel rails have been laid this year up to October 31, and it is expected that 60 miles in addition will be laid up to January 1, 1881. Four hundred and eighty-five miles of steel rail were laid previous to that time, in main track, which will make 717 miles of steel track, leaving but 325 miles of steel rail to be laid hereafter to make this division steel rail entire.

Total number of ties put in track from January 1, 1880, to November 1, is 412,350. Of this number 24,580 were cedar, 267,871 were pine, and 119,899 were hard-wood ties, and cost, respectively, delivered on the line of the road, 54, 42, and 75 cents each.

Fourteen spans of iron bridges, from 100 to 150 feet in length, aggregating 1,510 feet, have been built and are in process of erection across Weber River, at or near Croyden, and across Papillion Creek.

No new wooden bridges have been constructed, but all necessary re-

pairs have been made. The road-bed has been raised and widened in many places, and one of the most marked improvements that has yet been made in the property is the change of grade near Elkhorn Station. This grade was something over 80 feet per mile, and by a heavy cut and fill of a mile and a quarter is being cut down to a grade of 21 feet per mile, the work now over two-thirds completed. Over the old grade a freight engine could not haul over 16 to 18 loaded cars, while over the changed grade the same engine can haul 40 loaded cars, with much less wear and tear in the performance of the service, thus demonstrating the desirability of making light grades when they are practicable.

At Laramie Rolling Mills a train of rolls has been added for the manufacture of merchants' bar iron, and machines for making nuts, bolts, spikes, and fish-bars for track work, and almost any other class of iron that may be wanted in the construction of cars, &c.

The water stations have been greatly improved. Nine new frost-proof iron-column water-tanks have been erected at the following stations: Millard, Central City, Wood River, Plumb Creek, Denver Junction, Sidney, Antelope, and Rawlins; and as old tanks may be renewed, or new tanks erected at new stations, similar tanks will be constructed.

The same permanent character of improvement can be noted in the erection of wind-mills, for pumping water, at Millard, Columbus, Central City, Wood River, Plumb Creek, Ogalalla, Denver Junction, Sidney, Antelope, Rawlins, and elsewhere. Cast-iron pits (or sockets) are used as the base, to which, above ground, the timbers are framed, saving the rotting of wood under ground. New wells have been put down, all 12 feet in diameter; at Millard to the depth of 40 feet; Central City, 17 feet; Wood River, 22 feet; Plumb Creek, Denver Junction, Sidney, Echo, and other stations. Other additional improvements have been made to water stations. At Council Bluffs three drive wells have been put down, each 95 feet deep; at North Bend, two drive wells; at Sydney, system of water-works put in, with hydrants, for fire protection; pump and boiler house erected 22 by 30 feet, and steam pump and boiler put in.

At Cooper Lake and Rawlins permanent improvements have been made, and at Echo a new frost-proof tank is in course of construction. Frame pump house 24 by 32 feet, with steam pump and boiler, four hydrants, several thousand feet of iron pipe and suction pipe is used at the different stations for the forcing of water through long distances for the protection of the company's property in case of fire.

Improvements and additions to shops have been made at the following stations: Omaha, brass foundry enlarged, with brick building 14 by 46 feet, and four new brass furnaces put in; addition to iron foundry frame building (detached), 24 by 173 feet. Grand Island, new shops in course of construction; stone building, main building 100 by 150 feet; engine and boiler room, 50 by 50 feet.

North Platte office building, frame, 14 by 20; Echo, frame engine-house, 60 by 75, four stalls; Evanston, frame addition to boiler-shop, 36 by 40; Uintah, frame engine-house, 20 by 60.

Additional machinery has been purchased during the year for shops at Omaha, Grand Island, North Platte, Laramie, Rawlins, and Evanston, consisting of punching-machines, drill-presses, bolt-cutters, wheel-presses, lathes, &c.

The motive power of the Union Division has been largely added to by purchase of new engines and the rebuilding and overhauling of old ones. Nineteen ten-wheel freight engines, 4 mogul switching engines, each 3 pair drivers, 1 single truck, 5 ten-wheel freight engines, purchased but not delivered (were to have been delivered in November); 13 engines have

been rebuilt, new and large boilers put in, and new 17-inch cylinders put in in place of 16-inch; 11 engines have had new and larger boilers put in; 9 engines have had new 17-inch cylinders put in in place of 16-inch; 40 engines have had general repairs of boilers and machinery; making, in all, 73 engines that have been rebuilt, partially enlarged and renewed, and thoroughly overhauled, thus keeping the motive power of this division up to a high standard. Plans for a new wheel foundry have been made with capacity to make 160 car-wheels a day, and its erection is now being considered.

Coal sheds and shutes have been built at Denver Junction; shed 256 by 35 feet, with inclined track to storage bins; 16 bins, capacity 20 tons each; 32 shutes, capacity 4 tons each. At Echo, coal sheds and shutes of similar capacity. At Plumb Creek, additional shutes have been added to old coal sheds, and a hoisting engine put in to elevate coal from store shed to top of shutes. These improvements, with the coal sheds and shutes at other stations on the line of the Union Division, make large storage capacity for coal and numerous convenient shutes for supplying the locomotives with coal. The car department has been well maintained, and, besides maintaining the cars of the company, has built several new passenger coaches for the main line of this division, and upwards of 175 box, flat, coal, and dump cars, with baggage cars, mail cars, and passenger coaches for branch lines of road.

In the fitting of the passenger cars brass catches are bought by the company and plated. The company does its own nickle and silver plating, upholstering, &c., and as good or a better car of any kind can now be turned out at the shops of the company than can be purchased from a car manufacturer.

Emigrant sleeping cars, for the comfort of emigrant travel, have been introduced on the road; 9 cars have been changed into sleepers, with two tiers of double births on each side of the car, twelve in number, and each car will accommodate 48 persons comfortably. Preference is now given to women and children in their use, and it is the purpose of the company to change their emigrant equipment of 53 cars into sleepers; emigrants furnish their own bedding, and no extra charge is made for use of car.

Cattle yards have been built, during the year, at Alda, Benton, Brady Island, Rock Creek, and Medicine Bow stations. The transportation of cattle this year over the line of road has been less than last on account of the bad condition of feed on the cattle ranges and the lateness of the season at which cattle were fat enough for shipment to market. Also, owing to the early cold weather preventing shipments, several car loads of cattle this year have been shipped from distant stations on the Utah and Northern Road, from which road a large increase in shipments of cattle may be expected, which promises to increase largely the average length of haul of cattle over the line of road. The prospects for next year's business, from cattle shipments, is said to be better than any past year.

The production of coal shows an increase this year, for the first six months, of upwards of 60,000 tons, and, owing to the early and continued cold weather, promises a larger increase for the last six months of the year, and in consequence of the increased cost of labor will show an increased cost of production.

Production and cost of coal, year ending June 30, 1879, 315,832 tons, cost \$1.02½; year ending June 30, 1880, 393,428 tons, cost \$1.11. Three new coal mines have been opened during the year, none of which are developed far enough yet to give any great increased production. The



deposits of coal along and near the line of road are large, and increased business, from coal transportation, can only be measured by the growth of the country. Experiments in cokeing have been abandoned for the present, as no coal has yet been found on the line of the road that will coke.

Prof. Samuel Aughey has made a very interesting preliminary report on the Wyoming Oil Springs, situate 78 miles north from Point of Rocks Station. Crude petroleum can be obtained there in large quantities that has fine lubricating properties, and from which very superior oil is refined. In time this oil region will afford a large traffic to the road.

The express business of the road is now done by the Pacific Express Company, a company organized by this railway company in connection with a connecting railway company, the stock of the express company being owned by the railway companies, in proportion to the amount of express business that each company may do, this company owning the controlling interest in same.

The land department is offering liberal inducements to emigrants desiring to examine the lands of the company with a view of purchase and settlement. By a general system of advertising at home and abroad, and greatly reduced rates of transportation, the expenses of this department have been increased.

Number of acres sold during the year 1880, 162,018.41, at an average price per acre of \$4.82. This body of land has been sold in small tracts, as the average number of acres to each purchaser is only 92. This promises proper cultivation.

Collections this year will exceed any previous year by \$150,000 to \$200,000. Amount transmitted to the treasurer during the year 1880, \$478,500. Department expenses for the year, \$50,108.60. Sales canceled, 32,478.11 acres.

Terms of consolidation of the Union Pacific, Kansas Pacific with Leavenworth Branch, and the Denver Pacific, as to the respective stock interest of the respective companies, in the consolidated company:

Union Pacific Railroad, stock.....	\$36,762,300
Kansas Pacific Railway Company, stock.....	10,000,000
Denver Pacific Railway and Telegraph Company, stock.....	4,000,000

Making the stock of the consolidated company.....	50,762,300
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The Union Pacific Railroad Company created a collateral trust bond, dating from July 1, 1879, to run 29 years from that date, drawing 6 per cent. per annum interest, interest payable semi-annually, making the Union Trust Company of the city of New York trustee. The first mortgage bonds of the Colorado Central Railroad Company, Omaha and Republican Valley Railroad Company, and the Utah and Northern Railway Company, all of which draw 7 per cent. per annum interest, and are issued respectively for fifteen, ten, and twelve thousand dollars per mile, owned by the Union Pacific Railroad Company, are deposited in this trust. And as said bonds are deposited the Union Trust Company certify and deliver to the railroad company collateral trust bonds for eighty per cent. of the par value of bonds so deposited; the interest upon which is sufficient to pay the interest on the collateral trust bonds, and provide a sinking fund for the gradual redemption of the bonds in trust.

Five million dollars of collateral trust bonds have been delivered to the railroad company, in conformity with the terms of the trust, nearly all of which have been sold; last sales made at \$1.05, and their proceeds have been substantially used to aid in the construction of branch roads, thus enabling the railroad company to retain the securi-



ties of its branch roads, and by their deposit, in this or similar trusts, multiply the construction of branch roads, as the mining interests or farther settlement of the country may require. A copy of this trust indenture the government directors attach to this report.

The Union Pacific Railway Company hold large assets, in the securities of the roads it has aided in construction, consisting of first mortgage bonds, and stock, which as the country that is traversed by these branch lines is developed, by the opening of mines or settlement, are constantly increasing in value. The par value of such securities now amounts to fully forty million dollars. A present estimated value of said securities was made by the auditor of the company, July 19, 1880, as being worth \$28,575,651.65, \$6,334,000 of which have been put into the collateral trust bond trust.

The estimated gross earnings of the Union Pacific Railway, for the current year, nearly eleven months of which have transpired, and branch lines of railroad are..... \$25, 000, 000  
Of which the branch lines will earn about..... 2, 500, 000

Leaving ..... 22, 500, 000

The Union Division will probably earn of this amount \$15,750,000; the Kansas Division \$6,750,000. This would show that the Union Division earns 70 per cent. of the gross earnings, and the Kansas Division 30 per cent., showing an increase of gross earnings this year, compared with last, on the Union Division of \$2,549,000, and a larger proportionate increase of gross earnings on the Kansas Division. This can be accounted for by the consolidation. The business of the whole Southwest, as well as that from lake points, Central Indiana, Illinois, Ohio, and a fair proportion of through business, for which the separate roads competed before the consolidation, has gone into its natural channel of transportation; while formerly all of this business that the Union Pacific Railroad could control, as well as the roads terminating at Council Bluffs and Omaha, went to those respective points for distribution.

The operating expenses for the current year on the Union Division will be about 44 per cent. of its gross earnings, including renewals and taxes. On the Kansas Division about 50 per cent., including renewals and taxes.

The expenses of the general offices in New York and Boston are apportioned to consolidated roads on a mileage basis.

The Pullman sleeping-car contract will expire next year, and, unless a new contract can be made on a liberal basis, in which the railway company will be largely interested in the revenue received for the use of the cars, before the expiration of the contract, the railway company will consider and determine the question of running its own sleeping-cars.

The directors are informed that substantially the same pooling arrangements exist this year as last. At competitive points, with competitive roads, the business is pooled, the road performing the service deducting 40 per cent. for operating expenses, and the balance is divided on an agreed percentage basis.

A contract for five years with the Atlantic and Pacific Steamship Company has been prepared, in which the Central Pacific Railroad Company is a party, and authority has been given for its execution, the terms of which govern in settlements between the steamship company and the railway companies; but the same has not yet been executed.

The same policy of the improvement of the property is manifest for the coming year as has been shown for the past two years. Contracts have

already been made for 35,000 tons 60-pound steel rails, 5,000 tons 40-pound rails for the Utah and Northern, 12 first-class passenger coaches, 5 first-class narrow-gauge coaches, 500 box-cars, 300 cattle-cars, 18 ten-wheeler Taunton engines, 15 consolidated fifty-ton engines (17 more engines are being negotiated for, making 50 engines of this class), and 25 narrow-gauge engines have been contracted, for the Utah and Northern, deliveries of which are to be made at stated periods during the year 1881; and orders have been given for two Pullman narrow-gauge sleepers, and at the shops of the company to build for the Utah and Northern Road 2 mail and express cars, 50 box, and 25 cattle cars.

It is now expected that the Atchison, Topeka and Santa Fé Railroad will be completed to a connection with the Southern Pacific Railroad of California, in New Mexico, by the first of January. This will make a competing line of railway through to California, about 400 miles longer than via the Union Pacific and Central Pacific Railways to San Francisco. In passenger travel, eighteen hours additional time will be required to make the trip to San Francisco, and thirty-three hours additional time for freight transportation. Hence, as quick transit, particularly on long routes of travel, is very desirable and generally sought for, the Union and Central Pacific Railway route will doubtless remain the favorite route for passenger travel and freight traffic. The government directors are informed that a satisfactory business arrangement will be made with this competing line of railway, and thus avoid undue competition for business.

The policy of building and aiding to build branch lines of railroad by this company, that has been pursued in past years and is still being continued, was wise, both in its conception and in its execution, as the trunk line of railway has branch and feeding lines of railway to support it, independent of its through business, which now amounts to but a small proportion of its traffic, viz, 28 per cent.

The tabular statement attached will show the number of through cars of freight hauled on the Union Pacific Railway between Omaha and Ogden, for through California business, in the months of August, September, October, and November, 1879 and 1880. Average daily for 1879, twenty-eight cars per day each way; for 1880, thirty-three cars per day each way. And any loss of through business in the year 1881 there may be, in consequence of division with the Atchison, Topeka and Santa Fé Railroad, will, in the opinion of the government directors, be more than made up in the increased business that will be derived from its branch lines of road and its local business.

Consolidation is now becoming a great feature in the railway management of this country. It tends towards economy, and greatly facilitates travel and freight traffic. The internal commerce of the country is demanding quick transit, and equalized and uniform rates of transportation. Consolidation will give the former, as through trains of freight can be made up over consolidated roads for given points, and the delay and loss of time can thus be avoided that occurs, where trains are made up containing cars for different localities, in switching.

The latter by liberal railway management.

The present combination and pooling system of railway management prevents undue competition, and it is claimed, as pools are made up on the basis of earnings, through, to, or from a given competing point or points, or supposed earnings of the competing lines.

Shippers of property are not imposed upon, but uniform and equalized rates of transportation are fixed and maintained.

With the large productions of the country for the past two years, the

ready and satisfactory market for their sale, both at home and abroad, with the ability of the rolling stock of the railways of the country, at times taxed to its utmost capacity, to move the products of the country to market and to the seaboard ports for export.

This theory is becoming an accepted one. The time for its test will come when the productions of foreign consuming countries are large, and our own products, by similar productions and limited export demand, begin to accumulate in the granaries of our agriculturists and elevators and warehouses at our marts of commerce, and consequent low prices for same prevail; for then lower rates of transportation will be demanded than now prevail.

Consolidation with the Central and Southern Pacific Railways has been informally considered, relative to which no satisfactory conclusion has yet been reached, upon an equitable basis, both for the interest of the government and the respective railways it would be desirable.

GEO. B. SMYTH,  
R. P. BUCKLAND,  
C. C. HOUSEL,  
JUDSON KILPATRICK,  
*Government Directors.*

# REPORT

## OF

# THE POSTMASTER-GENERAL.

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WASHINGTON, D. C., *November* 13, 1880.

SIR: I took charge of the Department on the 25th of August, and therefore I speak of it historically and as I find it, with little reference to my own administration, which did not commence until after the expiration of the fiscal year, with whose transactions the present report is chiefly concerned.

The object for which this Department was established is the interchange of intelligence among the people.

The domestic postal business of the last fiscal year was as follows:

### DOMESTIC CORRESPONDENCE.

#### Letters—

In plain envelopes .....	467,609,556	
In "card or request" envelopes .....	365,024,920	
In "official penalty" envelopes .....	35,859,096	
Total letters .....		866,593,572
Postal cards .....		276,446,716
Newspapers to subscribers and news agents .....		695,175,624
Magazines to subscribers and news agents .....		53,472,276
Books, circulars, and miscellaneous printed matter .....		300,845,480
Articles of merchandise .....		22,634,456
Grand total .....		2,215,168,124

### STATISTICS OF TRANSPORTATION OF THE MAILS.

On the 30th of June, 1880, there were in the service of the Department 5,862 contractors for the transportation of the mails on public routes.

There were at the close of the fiscal year 1,857 special offices, each with a mail-carrier, whose pay from the Department is not allowed to exceed the net postal yield of the office.

Of public routes in operation there were 11,112 (of which 1,118 were railroad routes, being an increase of 59 routes of this class over the preceding year), aggregating in length 343,888 miles; in annual cost, \$18,707,706. Adding the compensation of railway post-office clerks,

route-agents, mail-route messengers, local agents, and mail-messengers, amounting to \$3,548,278, the aggregate annual cost was \$22,255,984.

The service was divided as follows :

Railroad routes: length, 85,320 miles; annual transportation, 96,497,463 miles; annual cost, \$10,498,986 (of which amount \$1,261,041 is for railway post-office car service), about 10.88 cents per mile. Steamboat routes: length, 23,320 miles; annual transportation, 5,668,538 miles; annual cost, \$887,221, about 15.65 cents per mile.

Other routes on which the mails are required to be conveyed "with celerity, certainty, and security:" Length, 235,248 miles; annual transportation, 76,070,995 miles; annual cost, \$7,321,499; about 9.62 cents per mile.

There were at the close of the fiscal year 4,737 offices supplied by mail-messengers, at an annual cost of \$697,298. The railroad routes were increased in length 5,329 miles, and in cost \$931,396.

The steamboat routes were increased in length 2,080 miles, and in cost \$132,833. The star routes were increased in length 19,768 miles, and in cost \$919,669.

There was an increase over the preceding year in the total length of routes of 27,177 miles; in annual transportation, 10,804,191 miles; and in annual cost, \$1,983,898. Adding the increase in cost for railway post-office clerks, route-agents, mail-route messengers, local agents, and mail-messengers, amounting to \$259,214, the total increase in cost was \$2,243,112.

#### POST-OFFICES ESTABLISHED AND POSTMASTERS APPOINTED.

The report of the First Assistant Postmaster-General shows the following:

Number of post-offices established during the year.....	3,462
Number discontinued.....	1,328
Increase .....	2,134
Number in operation June 30, 1879.....	40,855
Number in operation June 30, 1880.....	42,989
Number filled by appointment of the President .....	1,761
Number filled by appointment of the Postmaster-General.....	41,228

Appointments were made during the year :

On resignations and commissions expired.....	6,322
On removals .....	561
On changes of names and sites.....	690
On deaths of postmasters .....	356
On establishment of new post-offices.....	3,462

Total appointments .....	11,391
Number of cases acted on during the year.....	13,620



**NUMBER OF POST-OFFICE INSPECTORS AND EMPLOYÉS OF THE RAIL-  
WAY MAIL SERVICE.**

The number and aggregate compensation of post-office inspectors, railway post-office clerks, route agents, mail-route messengers, and local agents in service during the year ended June 30, 1880, were:

* 46 post-office inspectors .....	\$146,863 27
1,206 railway post-office clerks.....	1,378,160 00
1,252 route agents.....	1,139,000 00
338 mail-route messengers.....	206,540 00
150 local agents .....	127,280 00
	<hr/>
	\$2,997,843 27

**EMPLOYÉS IN THE POSTAL SERVICE.**

The following table shows the number of employés in the Post-Office Department; also the number of postmasters, contractors, clerks in post-offices, railway post-office clerks, route agents, and other officers in service June 30, 1879, and June 30, 1880:

	June 30, 1879.	June 30, 1880.
<b>Departmental officers and employés:</b>		
Postmaster-General .....	1	1
Assistant Postmasters-General .....	3	3
Superintendent of money-order system .....	1	1
Superintendent of foreign mails.....	1	1
Chief clerk to the Postmaster-General.....	1	1
Chiefs of divisions.....	5	5
Topographer for Post-Office Department.....	1	1
Disbursing officer and superintendent of building.....	1	1
Law clerk.....	1	1
Stenographer .....	1	1
Appointment clerk .....	1	1
Superintendent of blank agency .....	1	1
Chief clerks of bureaus.....	5	5
Clerks, messengers, watchmen, &c.....	391	396
	<hr/>	<hr/>
	414	419
<b>Postmasters and other officers and agents:</b>		
Postmasters .....	40,855	42,989
Contractors .....	5,659	5,862
Clerks in post-offices.....	4,894	5,519
Letter-carriers .....	2,359	2,688
Railway post-office clerks.....	1,091	1,206
Route agents.....	1,143	1,252
Mail-route messengers .....	241	338
Local agents .....	134	150
Special agents.....	54	56
	<hr/>	<hr/>
Total in service .....	56,844	60,479

\* Other post-office inspectors charged to separate appropriations.

## RAILWAY POST-OFFICE LINES.

A tabular statement hereto appended shows that the number of railway post-office lines in operation on the 30th of June, 1880, was 69, extending over 20,140 miles of railroad routes, an increase of 2,800 miles as compared with the previous year.

The number of railway postal clerks in the service at the close of the fiscal year ending June 30, 1879, was 1,091, whose annual salaries aggregated \$1,260,590.

The number of postal clerks in the service at the end of the fiscal year 1880 was 1,206, whose annual salaries aggregated \$1,378,160, showing an increase of 115 clerks and of \$105,870 in salaries.

The annual miles of service performed by railway postal clerks, route agents, and mail-route messengers was 65,763,993, an increase over the previous year of 13,344,220 miles.

## RECEIPTS AND EXPENDITURES.

The total expenditures of the department during the fiscal year ended

June 30, 1880, were ..... \$36,542,803 68

The revenues were as follows:

Ordinary receipts .....	\$32,934,739 37	
Receipts from money-order business.....	269,205 25	
Receipts from official stamps and stamped envelopes..	111,534 72	
	<hr/>	33,315,479 34

Excess of expenditures over receipts ..... \$3,227,324 34

Included in the above statement of receipts and expenditures is the sum of \$440,983.30 paid on liabilities incurred in previous fiscal years, and not properly chargeable to the expenditures of the last fiscal year.

Deducting this sum from the aggregate amount, leaves as the actual

expenditures on account of service for the year ..... \$36,101,820 38

The amount appropriated for service of the fiscal year 1879-'80, includ-

ing sums appropriated by special acts, was..... \$37,757,089 87

Amount expended for 1879-'80 ..... 36,101,820 38

Leaving an unexpended balance of appropriations for the year of .... \$1,655,269 49

This balance will be largely reduced when the unadjusted liabilities for the year have been reported and paid.

A table accompanying the report of the Third Assistant Postmaster-General, shows the condition of the several accounts on the 30th of September, 1880.

The expenditures and receipts of the department, therefore, on account of and appertaining to the business of the last fiscal year (excluding expenditures and receipts on account of previous fiscal years), are as follows, viz:

Expenditures .....	\$36,101,820 38
Receipts, (ordinary, from money-order business, and from official stamps).....	33,315,479 34

Showing an excess of expenditures over receipts, chargeable against

the appropriations from the Treasury hereinafter enumerated, of... \$2,786,341 04

The expenditures for the service of the fiscal year were \$3,028,382.56, or 9.1+ per cent., more than those of the preceding year. This increase is chiefly due to the extension of mail service and to the increase in the postal car service.

The total receipts for the year were \$3,273,496.48, or 10.8+ per cent., more than those of the preceding year, and \$2,651,455.44, or 8.6+ per cent., more than the estimates therefor. The increase in the amount of revenue over the amount estimated is attributable, in a great measure, to the continued business prosperity of the country, resulting in an increased demand for postage stamps, postal cards, &c., the sales of which amounted to \$3,349,045.16 more than for the previous fiscal year, and \$4,118,527.03 more than for 1878.

Excluding official postage stamps and money-order receipts from both fiscal years, there is an increase of ordinary receipts over the past fiscal year of \$3,500,090.94, or 11.8+ per cent., and over the fiscal year 1877-'78 of \$4,170,894.21, or 14.5+ per cent.

The expenditures and receipts by fiscal quarters, and the increase or decrease therein as compared with the corresponding quarters of 1877-'78 and 1878-'79, are shown by a table which accompanies the report of the Third Assistant Postmaster-General.

#### AMOUNT DRAWN FROM THE TREASURY ON APPROPRIATIONS.

The following amounts were drawn from the Treasury during the fiscal year on account of special and deficiency appropriations:

To supply deficiencies in the revenues for the year ended June 30, 1880, act of March 3, 1879 .....	\$3,500,000 00
For deficiency in the postal revenues for 1877 and for prior years, act of June 16, 1880 .....	97,717 20
Total .....	<u>\$3,597,717 20</u>

#### ESTIMATES FOR 1882.

The estimated expenditures for the fiscal year ending June 30, 1882, are .....	\$42,475,932 00
The ordinary revenues are estimated at .....	\$38,545,174 10
Estimated revenue from money-order business .....	300,000 00
Total estimated revenue for the fiscal year ending June 30, 1882.	<u>38,845,174 10</u>
Estimated excess of expenditures to be appropriated out of the general Treasury as a deficiency .....	\$3,630,757 90

A table accompanying the report of the Third Assistant Postmaster-General, furnishes the estimates in detail.

#### DEFICIENCY APPROPRIATIONS.

The following statement shows the condition of the appropriations from the general Treasury to supply deficiencies in the postal revenues, viz:

1. For the fiscal year ended June 30, 1879, the amount appropriated from the Treasury to supply deficiencies in the revenues was \$4,222,274.72,

of which \$1,222,274.72 remains undrawn and available for unadjusted liabilities contracted prior to July 1, 1879.

2. For the fiscal year ended June 30, 1880, the amount appropriated from the Treasury to supply deficiencies in the revenues was \$5,457,376.10, of which \$1,957,376.10 remains unexpended and available for unadjusted liabilities for said fiscal year.

#### LIABILITIES.

It is estimated that the balances stated above will be more than sufficient for the payment of all unadjusted liabilities incurred during the years for which the appropriations were made.

The expenditures and receipts of the department, and the condition of accounts, will be found in detail in the report of the Auditor for the Post-Office Department hereto annexed.

#### COLLECTION-ORDER SYSTEM DISCONTINUED.

On the 3d of August, 1880, the system of collecting quarterly balances in the hands of postmasters, by what were known as "collection orders," was discontinued, and the depositing system substituted. The change was necessitated by the great increase in the volume of postal business, which rendered this method of collecting the revenues of the department too unwieldy to handle, and the cause of much delay in settling the accounts of postmasters and mail contractors. As stated by the Auditor for the Post-Office Department, in a letter on this subject, it was practically impossible to keep an intelligent control over the several annual appropriations covering the transportation of the mails while the collection-order system was in vogue. By its discontinuance the department is enabled to secure uniformity of system and greater expedition in collecting its revenues, and the Auditor is enabled to settle promptly the accounts of its creditors.

By discontinuing the collection order system some thirty thousand post-offices were changed from "collection" to "deposit," involving a great amount of labor and rendering it absolutely necessary that an additional force be provided for the division having charge of deposit accounts, for which an estimate has been submitted. The appropriation should be made available immediately upon its passage.

#### POSTAGE-STAMPS, STAMPED ENVELOPES, AND POSTAL CARDS.

The number of ordinary postage-stamps is-

issued during the fiscal year was.....	875,681,970, valued at..	\$22,414,923 00
Of newspaper and periodical stamps.....	1,770,082, valued at..	1,252,903 30
Of special stamps for the collection of postage due under the act of Congress approved March 3, 1879 .....	6,284,500, valued at..	251,836 00
Of postal cards, domestic.....	269,754,000, valued at..	2,697,540 00
Of postal cards, international.....	2,796,500, valued at..	55,930 00
Of stamped envelopes, plain.....	98,616,000, valued at..	2,496,238 93

Of stamped envelopes, special request:...	76, 835, 500, valued at..	\$2, 381, 355 15
Of newspaper-wrappers .....	31, 685, 500, valued at..	381, 787 60
Of official postage-stamps .....	3, 351, 995, valued at..	140, 199 08
Of official stamped envelopes and wrappers.	621, 000, valued at..	14, 624 40
<hr/>		
Aggregating .....	1, 367, 397, 047, valued at..	\$32, 087, 342 46

INCREASE IN ISSUES OF POSTAGE-STAMPS, ETC.

The above issues, both in number and value, exhibit a very marked increase over the issues of the preceding year. The increase in value is shown by the following table :

Articles issued. *	Fiscal year ended June 30, 1879.	Fiscal year ended June 30, 1880.	Increase.	
			Value.	Per cent.
Ordinary postage-stamps .....	\$20, 117, 259 00	\$22, 414, 928 00	\$2, 297, 669 00	11.4
Newspaper and periodical stamps .....	1, 088, 412 16	1, 252, 903 30	164, 491 14	15.1
Postage-due stamps .....	265, 957 00	251, 836 00	*111, 121 00	*31.1
Postal cards .....	2, 217, 970 00	2, 753, 470 00	535, 500 00	24.1
Stamped envelopes, plain .....	2, 160, 417 92	2, 496, 238 93	335, 821 01	15.5
Stamped envelopes, special request .....	2, 139, 704 10	2, 381, 355 15	241, 651 05	11.2
Newspaper wrappers .....	355, 218 90	381, 787 60	26, 568 70	7.4
<hr/>			<hr/>	
Total ordinary issues, increase .....			\$3, 487, 579 90	12.2
Official stamps, stamped envelopes, and wrappers .....	1, 094, 011 85	154, 823 48	*939, 188 37	.....
<hr/>			<hr/>	
Aggregate increase .....			\$2, 548, 391 53	8.6

\* Decrease.

In forwarding through the mails the supplies for 1880, but four packages, of the value of \$63, were lost, and these not from any carelessness or other fault of postal officers.

POSTAGE ON NEWSPAPERS AND PERIODICALS.

The total amount of postage collected during the year on newspapers and periodicals mailed to regular subscribers from known offices of publication was \$1,226,452.58, an increase of \$122,267.91, or more than 11 per cent. The weight of this matter was 61,322,629 pounds, or 30,661 tons. The number of post-offices at which the matter was mailed was 4,423, an increase of 235 over the number for the previous year.

DEAD LETTERS AND OTHER MAIL MATTER.

The statistics of the department show that 866,593,572 letters were mailed in the United States during the last fiscal year, and that during the same period 3,057,141, or one in every 283, became "dead." The causes which operate to bring mail matter to the Dead-Letter Office have been so frequently stated in the annual reports of my predecessors that I will not repeat them here. One of the chief reasons why so small a percentage of letters reaches the Dead-Letter Office is, that the return-request system immediately restores them to the writer when unpaid or misdirected, or ultimately does so when unclaimed at the office



of destination. The total number of letters mailed in fifty of the principal cities last year was 385,878,948, and of these 226,369,000, or 59 per cent., were inclosed in envelopes bearing the address of the sender. Of the whole number of letters mailed in the United States (eight hundred and sixty-six and one-half millions), 400,884,016, or 46 per cent., bore upon the outside sufficient data for their intelligent return to the writers if undelivered. This system cannot be too highly commended to the public, and particularly to business men, who would often be spared vexatious delays in important correspondence by having their names and addresses printed on their envelopes, so that the local postmaster may call the writer's attention to any deficiency in postage or direction.

From tables submitted with the report of the Third Assistant Postmaster-General (see Appendix, pages 361-375), it appears that of the whole number of letters received in the Dead-Letter Office during the year 2,560,402 domestic letters were unclaimed at the office of destination; 284,503 were held for postage at the mailing office; 201,899 were insufficiently addressed; while 9,167 bore no superscription whatever. The number of foreign letters received was 207,917. The number of packages of third and fourth class matter which were regarded of sufficient value to be recorded was 45,664.

Of the 6,996,513 registered letters and parcels mailed in this country during the year but 7,445 became dead, and of these 7,016 were successfully restored to the owners.

The amount of money separated from letters and deposited in the Treasury was \$2,751.20. The proceeds of the sale of articles for which no owners could be found was \$3,465.12. The postage collected on short-paid matter and on parcels of third and fourth class matter returned to the senders amounted to \$3,047.41.

#### CHARITABLE DISTRIBUTION OF DEAD LITERATURE.

Among the matter sent to the Dead-Letter Office for which no owner could be found were many valuable publications, such as books, pamphlets, magazines, and illustrated newspapers, which it seemed a pity to dispose of as waste-paper, in accordance with the former practice; and so, by authority of the law placing the disposition of such matter within the discretion of the Postmaster-General, an order was made directing these publications to be distributed among the charitable institutions of Washington for the entertainment of their inmates.

#### STATISTICS OF REGISTRATION.

The total number of letters and parcels registered during the year was 6,996,513, of which 5,251,118 were domestic letters, 418,656 domestic parcels of third and fourth class matter, 249,722 letters to foreign countries, 8,247 parcels of third and fourth class matter to foreign countries,

and 1,038,770 letters and parcels forwarded for the government, and by law exempt from the payment of registry fees. The amount of registry fees collected during the year was \$595,774.30, an increase over the amount collected during the preceding year of \$136,038.60, or 29.57 per cent. The increase in the number of letters and parcels registered was 1,567,491. The registration of third and fourth class matter is still attended with extraordinary success. In the New York post-office alone the number of parcels of this matter registered during the year was 153,523, the fees on which amounted to \$15,352.30.

#### ESTIMATES FOR THE CONTRACT OFFICE.

For the estimates of the amounts necessary to be appropriated for the fiscal year ending June 30, 1882, for the various items incident to the transportation of mails, reference is made to the report of the Second Assistant Postmaster-General, hereto appended, in which the estimates and the reasons therefor are given in detail.

I would say in this connection that these estimates have been carefully reviewed by me, and are believed to be in accordance with the probable requirements of the service.

#### SPECIAL FACILITIES FOR FAST MAIL SERVICE.

An appropriation is recommended for the continuance of special mail facilities on railroads—such as extra trains with mails only, and the acceleration of regular trains carrying the mails, &c., which the people have enjoyed for several years past.

It would be impossible to maintain the service at its present state of efficiency without this appropriation unless the general law governing the compensation for the transportation of mails by railroad be changed so as to afford compensation for this class of service. And it may be added that it is the desire of the department to extend this service to business communities where it is needed and would be most valuable.

#### STAR SERVICE.

Attention is invited to the statement of the Second Assistant Postmaster-General respecting the transportation of mails on "star routes," as worthy of careful consideration. (Page 75.)

The wonderful rapidity with which the country recuperated from a state of lowest depression in 1877 to one of unusual prosperity, development, and progress in 1879, challenges the attention of intelligent people of all countries.

I cannot doubt that during this period the Post-Office Department was confronted by an emergency without precedent in the history of postal affairs; and that to have restricted the postal service to the meager appropriation for 1879 would have rendered it entirely inadequate to the wants of the people.

## TEMPORARY STAR SERVICE.

It is recommended, as a measure of economy, in cases where it becomes necessary to establish service on new routes in advance of the regular yearly or half-yearly advertisements, that authority be given the Postmaster-General, upon failure to secure bids for mail-service at rates that seem to him reasonable, to invite bids by advertisement for the space of three weeks in a newspaper at each terminus of the route; or if there are no such newspapers, then in not exceeding three newspapers published nearest the terminal points of the route upon which service is desired.

## WORK OF THE TOPOGRAPHER'S OFFICE, POST-ROUTE MAPS, ETC.

During the past year new editions have been issued of all the maps hitherto published (22 in number, covered by 57 sheets). Successive editions at short intervals have been, and will always be, required to show the numerous additions and changes of post-offices, and the course and frequency of service on the post-routes.

A new map (in two sheets) of the State of Louisiana has been prepared and published. New maps to take the place of provisional copies are proposed of the Pacific States and Territories, and of the State of Florida, with Gulf and West India Islands service.

As usual, the topographer has answered all inquiries in reference to mileage and telegraph accounts referred for his certificate.

## NEW TABLE OF DISTANCES REQUIRED.

In this connection, attention is again called to the desirability of the compilation and publication of an extended table of distances for use in the settlement of these accounts, the existing edition of the table having long been obsolete in many details. For this, two temporary clerks have been estimated for.

The work of this office necessarily increases with the extension of the mail service; maps for the use of the postal employes are in constant and urgent demand, and they are also in great requisition by other departments of the public service, as facilitating their operations. In the estimates for the next fiscal year, I have requested for this bureau an amount which is the same as that asked for the present year by my predecessor, and which will, as usual, cover the salaries of draughtsmen and other employes and all other expenses connected with the production and printing of maps.

## OPERATIONS OF POST-OFFICE INSPECTORS.

The duties assigned to the post-office inspectors have been performed with great fidelity and ability. The vigilance and system employed by them render detection of criminal violation of the laws almost certain, which should deter officials and employes from yielding to temptation

and increase the confidence of the public in the postal system. Attention is invited to the estimate of the chief inspector (page 328) for the appropriation for this service for the next year, and to the necessity for an increased force explained therein.

### ARRESTS AND CONVICTIONS.

The number of persons arrested during the year was 577, of whom 497 were prosecuted in United States courts and 80 in State courts. Of the former 215 were convicted, 18 acquitted, 1 escaped, 34 proceedings were dismissed, 3 forfeited bail, and 226 await trial. There were 31 highwaymen arrested and prosecuted in United States courts. The arrests are classified as follows :

#### Subject to jurisdiction of United States courts:

Postmasters.....	52
Assistant postmasters.....	17
Clerks in post-offices.....	23
Postal clerks and route agents.....	10
Letter-carriers .....	9
Mail-carriers .....	31
Other employes.....	2
Highwaymen.....	31
Burglars .....	71
All others, for various offenses.....	251

#### Subject to jurisdiction of State courts:

Burglars.....	39
All others, for various offenses.....	41

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577

### CASES ACTED UPON BY INSPECTORS.

The number of cases referred to inspectors for investigation during the year was 29,569, as follows :

*Registered cases, Class A, 3,601.*—Registered letters reported lost, 2,726, of which 1,088 contained money and 1,638 contents not ascertained. Of this number, 1,716 were delivered, viz, 577 with money inclosures and 1,139 contents not known. Reported rifled of contents, 726, containing money and valuables, in 228 cases of which investigation proved claim of inclosure false. Letters tampered with, 15.

Registered packets reported lost, 94, of which 61 were delivered. Packets reported rifled, 40, of which 28 were falsely reported.

The disbursements of moneys collected and recovered on account of lost and rifled registered letters and packets amounted, in 435 cases, to \$6,855.94.

It will be observed that, including cases of lost and rifled registered letters and packets, there are 1,553, but after deducting the number of cases in which the value of the inclosures was recovered, there properly remains but 1,118, which, when comparison is made with the whole

number of letters and packets registered during the year, nearly 7,000,000, the safety of the registered mail is demonstrated.

*Ordinary cases, Class B, 21,921.*—Ordinary letters reported lost, 16,134, of which 4,310 contained money and 11,824 contents not specified. Of this number 1,662 letters were delivered. The number of packets reported lost was 5,119, of which 642 were delivered. The disbursements of moneys recovered on account of lost ordinary letters amounted in 15 cases to \$167.74.

Robberies of mail stages on the highway, 22; robberies of post-offices, 353; burning of post-offices, 78; and charges of depredation against postmasters, 215.

*Miscellaneous cases, Class C, 4,047.*—Embraced in this class are failing contractors, defaulting postmasters, change of postmasters, solvency of sureties of postmasters at money-order offices, inspection of post-offices and post-routes, forgery of money-orders, and violations of the postal laws not classed as depredations upon the mails. The amount of money collected by inspectors in these cases during the year amounted to \$50,412.93.

Number.

Cases reported upon by inspectors during fiscal year ended June 30, 1880:

Registered cases, including those referred in previous years .....	2,310
Ordinary cases, including those referred in previous years .....	12,233
Miscellaneous cases, including those referred in previous years .....	7,968
Total .....	22,511

#### THE FREE-DELIVERY SYSTEM.

The appropriation for this service was \$2,415,000, an increase of \$540,000 over that of the preceding year. The total cost of the service was \$2,363,693.14, leaving an unexpended balance of \$51,306.86 to be turned into the Treasury. The increase in the cost of the service over that of the previous year was \$415,986.53. This large increase was owing to the increased salaries paid to carriers, and to the extension of the service to additional cities as provided for in the act of February 21, 1879, and also to the large number of additional carriers appointed to keep up the efficiency of the service in the older free-delivery cities.

As provided in the act cited above the eighty-eight free-delivery cities were divided into two classes on the basis of seventy-five thousand population; those having a larger number of inhabitants were placed in the first class, and the remainder in the second class. The pay of two-thirds of the regular carriers in cities of the first class was fixed at \$1,000 per annum, and that of the remaining third at \$800 per annum. In cities of the second class the pay of the regular carriers was fixed at \$850 per annum; and the pay of auxiliary carriers at \$400 per annum without regard to the classification of the city. This reclassification of cities resulted in placing twenty-three cities in the first class and sixty-five in the second class, and went into operation at the beginning of the fiscal year July 1, 1879.



The service was extended, at different times during the year, to sixteen additional cities (making a total of 104), namely, Akron and Springfield, Ohio; Auburn, N. Y.; Augusta and Macon, Ga.; Bridgeport, Conn.; Dallas, Galveston, and Houston, Tex.; Jackson, Mich.; Little Rock, Ark.; Portland, Oreg.; Terre Haute, Ind.; Topeka, Kans.; Denver, Col.; and Sacramento, Cal. The reports from these new free-delivery post-offices indicate already a successful operation of the service and general popular satisfaction therewith.

#### POSTAGE ON LOCAL MATTER.

The postage on local matter at the several free-delivery offices exceeded that of the preceding year by \$256,273.28; and it also exceeded the cost of the service by \$705,104. This increase in postage on local matter was 9.11 per cent.; the increase in the cost of the service was 21.35 per cent.

The average cost per piece of handling matter was two mills and a half, an increase of one-tenth of a mill as compared with last year, and the average cost per carrier (owing to the increased salaries under act of February 21, 1879) was \$61.94 in excess of that of the previous year.

The most striking evidence of the success of free delivery is furnished by a comparison of its cost with that of the "penny-post" system. Under that system a fee of one cent per letter was collected by the carrier, to compensate him for the service of delivery; and the Postmaster-General, in his annual report for 1860, recommended that the fee be increased by law to an extent not exceeding twice that sum. The cost of delivery and collection under the present system was, during the past fiscal year, one-quarter of a cent per letter, and one-tenth of a mill more than that of the year preceding.

#### AGGREGATE RESULT OF FREE-DELIVERY SERVICE FOR THE FISCAL YEAR ENDED JUNE 30, 1880.

Statistics of Free Delivery.		Percent. of increase.
Number of offices .....	16	18.18
Number of carriers .....	29	13.95
Mail letters delivered .....	86	12.96
Mail postal cards delivered .....	31	24.19
Local letters delivered .....	45	11.64
Local postal cards delivered .....	40	22.39
Registered letters delivered .....	11	28.11
Newspapers delivered .....	06	19.46
Letters collected .....	49	16.77
Postal cards collected .....	23	27.61
Newspapers collected .....	03	7.93
Whole number of pieces handled .....	78	15.09
Pieces handled per carrier .....	29	3.37
Total cost of service, including pay of special agents .....	53	21.35
Average cost per piece, in mills .....	1	.4
Average cost per carrier .....	94	7.52
Amount of postage on local matter .....	28	9.11
Excess of postage on local matter over the total cost of serv	14	Decrease. 18.46

\* Based on the aggregate (\$2,357,650.86) paid carriers, including incidental expenses at the several  
 \* Does, less \$6,942.28 paid special agents.

## THE POSTAL MONEY-ORDER SYSTEM.

The money-order system continues to grow in popular favor, its operations having been increased from a little over one million of dollars in 1865 to more than one hundred millions in the past year. At the present rate of charges the business has been conducted, during the past five years, with no cost to the government. The fees have covered the expenses, with a slight margin of profit. The system is so near absolute perfection that losses to the senders or payees of money orders are only possible through their own negligence.

It is believed that this voluminous exchange has interfered very little, if at all, with the banking operations of the country. Most of the 4,829 money-order offices are at points where there are neither banks nor bankers, and the sums transmitted are mostly too small to justify the use of bills and drafts. It appears from a report of the Superintendent of the Money-Order System, hereto appended (page 401), that fully one-half of the orders issued are for sums less than five dollars. How to transmit these trifling amounts with reasonable security, and at the same time with the least possible trouble and expense to the public, has been a problem both in this department and in the British General Post-Office. While our fractional currency was in circulation, this supplied a tolerably convenient medium for the small exchanges of the country, but coin is peculiarly unfit for transmission through the mails.

## PROPOSED REDUCTION OF FEES.

Recent legislation in Parliament has provided for a postal note for sums less than one pound sterling. Before adopting this plan in the United States it will be well to observe its workings long enough to discover latent defects, if any such there shall prove to be. Meantime the superintendent suggests a scheme which seems to me entirely feasible, and which is commended to the attention of Congress. Briefly stated, his plan is to reduce the fee for money orders not exceeding five dollars to five cents, and to extend the maximum limit of an order from \$50 to \$100, so that the increased commissions received for large orders may offset the loss resulting from the reduced fee for small orders. The details of the plan will be found on pages 399-409 of the appendix.

## NUMBER OF DOMESTIC MONEY-ORDER OFFICES.

At the close of the fiscal year ended June 30, 1879, the number of domestic money-order offices in operation was 4,512. The number of additional offices established during the following year was 331, and the number discontinued was 14. There were, therefore, 4,829 domestic money-order offices in operation on the 30th day of June, 1880.

Since the close of the last fiscal year the system has been extended so as to embrace 339 more post-offices, while at one the business has

been discontinued, leaving the total number of money-order offices at present in operation, 5,167.

#### ISSUES AND PAYMENTS OF DOMESTIC MONEY ORDERS.

The number of domestic money orders issued during the last fiscal year was 7,240,537, of the aggregate value of \$100,352,818.83.

The number of orders paid during the same period was 7,213,607, amounting in value to \$99,516,702.46, to which is to be added the amount of orders repaid during the year, \$649,280.32, making the total amount of payments \$100,165,982.78; the excess of issues over payments being \$186,836.05.

The fees received by postmasters for the issue of domestic money orders during the year amounted to \$916,452.80.

An increase of \$12,098,177.81, or 13.71 per cent., in the amount of orders issued; of \$12,089,655.20, or 13.83 per cent., in the amount of orders paid; and of \$117,827.15, or 14.75 per cent., in the amount of fees received, is shown by the foregoing figures over the transactions of the previous year. The average amount of the orders issued was nearly \$13.86, and the average fee received was 12.66 cents; the former showing an increase of 1 cent, and the latter a gain of  $\frac{1}{10}$  of a cent over the averages for the preceding year.

The issue in one year of more than seven million money orders clearly indicates that the utility of the money-order system as a simple, safe, and convenient mode of making small remittances is fully appreciated by the public.

In the appendix (page 15) will be found a table, marked A, containing a summary of the operations of the domestic money-order system during each year since its establishment on the 1st of November, 1864, up to the present time.

In compliance with the request of the War Department, and as a matter of accommodation to a co-ordinate department of the government, money orders issued to the paymaster-general by the postmaster at Washington, D. C., for payment of claims against the United States for military services rendered by colored soldiers of the late war, have been transmitted, as in previous years, through the office of the superintendent of the money-order system instead of being sent direct to the beneficiaries by the remitter, as are other money orders. The amount of such orders issued during the past fiscal year was \$35,269.83. A complete record thereof is kept in the office of the superintendent of the money-order system. With them were sent certain blank forms which related to the claims, and to the proper execution of which by the beneficiary in each case the paying postmaster was requested to attend. The extra labor thus entailed upon the paying postmasters has been performed without additional compensation.

## DUPLICATE MONEY ORDERS.

Duplicate money orders are issued by the department without additional charge, when the original orders have been destroyed before payment or lost in transmission through the mails, or from some unknown cause have failed to reach the payee in due time, or when the originals have become invalid because not presented for payment until more than a year old, or are invalidated by a second indorsement; also to the remitters and in their favor, in cases where the payment of the originals, drawn in favor of the proprietors or agents of fraudulent lotteries or gift enterprises, or of persons engaged in conducting other schemes or devices "for obtaining money through the mails by means of false or fraudulent pretenses, representations, or promises," has been prohibited by the Postmaster-General, under the provisions of section 4041 of the Revised Statutes of the United States.

The number of duplicate money orders issued during the year ended June 30, 1880, was 20,647; exceeding by 1,672 the number issued during the year immediately preceding. A detailed statement of duplicate orders issued last year will be found in the appendix, marked B (page 15). Examination of this statement will show that the increase here alluded to was mainly in the class of cases which came under the operation of prohibitory orders issued by the Postmaster-General in pursuance of the provisions of the above-mentioned section.

## REVENUES AND EXPENSES OF THE DOMESTIC MONEY-ORDER SYSTEM.

The receipts and expenditures of the domestic money-order system during the last fiscal year, as adjusted and reported by the Auditor, are shown as follows:

Fees received on domestic money orders issued .....	\$916,452 80
Premiums, &c .....	638 78
	<hr/>
Total .....	\$917,091 58
Commissions and clerk hire.....	\$572,906 67
Incidental expenses .....	81,174 45
Lost remittances.....	4,424 35
Bad debts .....	1,011 03
Net revenue.....	257,575 08
	<hr/>
	\$917,091 58

This amount of revenue is \$33,614.31 greater than that of the previous year, showing a gain of about 15 per cent.

Allowances for clerk hire, amounting in the aggregate to \$151,596.82, were made during the year for certain of the larger offices. These allowances, which are included under the head of "Commissions and clerk hire" in the foregoing statement, were made out of the surplus of commissions accruing at the larger offices from the sale and payment of money orders, i. e., out of the excess over and above such amount of commissions as when added to the postmaster's salary would make his

entire compensation \$4,000 per annum, the limit fixed by law, except in the case of the post-office at New York City.

Included under the head of "incidental expenses" is the cost of books, blanks, and printing furnished to the Money-Order Office of the Post-Office Department by the Public Printer for the use of postmasters in the transaction of their money-order business, viz, \$43,165.75, which amount was paid during the year directly out of the proceeds of that business.

#### REMITTANCES OF SURPLUS MONEY-ORDER FUNDS.

During the year ended June 30, 1880, the sum of \$77,072,454.28, being surplus money-order funds that had accrued in the hands of postmasters from the sale of money orders in excess of what was required to meet the payment of orders drawn upon the same postmasters, was transmitted, either by means of drafts or in registered packages, to first-class offices used as depositories.

As shown in the appended tabular statement, marked C (page 16), forty cases of remittances of surplus money-order funds, amounting to \$11,989, reported as lost in transmission, were under investigation by the department during the past year. Ten of these cases, involving the amount of \$2,452, were pending at the close of the previous year, and eight more of the number, to the amount of \$5,545, were cases of loss during that year, but were not reported to the department until after the close of the period covered by the last annual report. Of the total amount there has been allowed the sum of \$4,424.35 to the credit of the postmasters by whom the remittances were made, this sum constituting the foregoing item of "lost remittances," under the head of "revenues and expenses of the domestic money-order system." Claims for credit on account of two of the remittances, amounting to \$200.95, have been disallowed; in ten of the cases, \$3,523.65 have been recovered by post-office inspectors in the service of the department; in two cases the amount, \$308.05 in all, consisted of drafts which have since been duplicated; and in one instance the amount, \$80, it was afterwards ascertained, had not been remitted. Seventeen claims on account of alleged remittances, amounting to \$3,452, were pending on the 30th day of June, 1880.

#### TRANSFER OF FUNDS AND DRAFTS.

At certain offices the amount of money orders payable is continuously, and at others occasionally, greater than the amount received thereat from the issue of orders or from depositing offices. Postmasters at such offices are authorized to transfer from time to time from the postage to the money-order account such amounts as may be necessary to enable them to pay, on presentation, the orders drawn upon them. On the other hand, postmasters receive from the Department special authorization, upon occasion, to transfer funds from the money order to the postage account. In cases where the postage funds are not a sufficient



resource upon which to draw for the payment of orders that are or may be presented; or when the postage funds are not available for transfer to the money-order account, the postmasters, if located east of the Rocky Mountains, are allowed credit to a designated amount in each case with the postmaster at New York, and are furnished each with a limited number of blank drafts for use in drawing against such credits, as the exigencies of their money-order business may require. If located on the Pacific slope, they are furnished with the necessary funds either by the postmaster at San Francisco, Cal., or the postmaster at Portland, Oreg., upon making proper application.

During the year the transfers made by postmasters from the postage to the money-order account amounted to \$893,496.94, and from the money order to the postage account to \$494,762.50, leaving a balance of \$398,734.44 to the credit of the postage account.

Drafts of the character referred to, amounting to \$9,439,878.85, were paid by the postmaster at New York in the course of the year. To meet similar requirements within the same period funds were furnished to the amount of \$225,747 by the postmaster at San Francisco, and \$18,997 by the postmaster at Portland, Oreg., to other postmasters in the Pacific States and Territories.

The sum of \$398,734.44 due the postage account as above mentioned by reason of the excess of transfers made by postmasters from that account to the money-order account was duly refunded by a deposit of that amount in the Treasury for the postal service, September 22, 1880.

#### MONEY ORDERS ERRONEOUSLY PAID.

Out of the total number of orders paid during the year thirty-eight, it has been alleged, were paid to persons fraudulently representing themselves to be the payees or the endorsees or agents of the payees. The amount of these orders was \$749.97. Comparing their number with the whole number of orders paid the ratio is found to be 1 in 189,831.

Ninety-one claims for reimbursement on account of erroneous payments of orders have been under consideration during the past year. Fifty-three of them relate to payments made during the previous year, or before; and of these thirty-four were not brought to the notice of the department in time to receive mention in the last annual report. In one case it was ascertained, upon investigation, that the order for \$20 had been paid to the proper person; in twenty-six cases the amounts, aggregating \$514.07, were recovered by post-office inspectors and paid over to the rightful owners; in eleven the paying postmasters were, after careful investigation, held responsible for erroneous payments to the amount of \$169; and in one instance the money, \$50, was refunded by the issuing postmaster, through whose negligence the error occurred. In five cases, which amounted to \$87, the loss was assumed by the department, neither the issuing nor the paying postmaster having been found at fault; and in six, where the erroneous payments resulted from

evident carelessness on the part of remitters, payees, or indorsees, the loss of the amount, \$156.20 in all, fell upon them. Forty-one claims, aggregating \$1,025.72 in amount, are still unsettled. The particulars of all these cases are given in the table in the appendix, marked D (page 18).

#### INTERNATIONAL MONEY-ORDER BUSINESS.

During the last year certain modifications of the terms of the original conventions for the exchange of money orders between the United States on the one hand, and the United Kingdom of Great Britain and Ireland, the German Empire, and the Dominion of Canada, respectively, on the other, were agreed upon by the postal administrations of the several countries. New conventions were accordingly arranged, and, having received the approval of the proper authorities in each country, are now in force. The modifications agreed upon tend to secure uniformity and simplicity in the provisions of the different conventions, and lessen the cost of the interchange of postal money orders between the contracting countries.

Under the original conventions, each of which was arranged and concluded at a time when the value of the currency of this country was below par of gold and was continually fluctuating, the issuing postmaster in the United States could not undertake to draw an order for a determinate sum in money of the country of payment, nor could a postmaster issuing an international order on either side draw directly upon a postmaster in the country where the intended beneficiary resided. The actual exchange of orders between the respective countries was effected through the agency of certain post-offices selected for the purpose and designated as "international exchange offices," and upon one of these the inland postmaster issuing an international money-order would draw. The conversion of the amount of each order from the money of one country to that of the other had to be made at the exchange office of the country of issue. The provision for conversion at the market rate of gold prevailing in New York on the day of the receipt of each order at the exchange office in the United States was absolutely necessary during the period of fluctuation of currency values in this country.

The post-office at New York was, and is yet, the exchange office designated, on the part of the United States, in the conventions concluded with the United Kingdom and Germany. Bangor, Me., Buffalo, N. Y., Detroit, Mich., Portland, Oreg., Saint Albans, Vt., and St. Paul, Minn., are the exchange offices in the United States designated by convention with Canada.

By the simplified mode of procedure under the new conventions with the United Kingdom and Canada, the order issued by the postmaster at an inland international money-order office is handed to the applicant (remitter) instead of being sent by the issuing postmaster, as formerly, to an exchange office. The remitter now mails the order himself, direct to the beneficiary, as does the remitter of a domestic money order.

The method now practiced in the transaction of German international money-order business differs so little from the new mode of procedure above referred to, that forms of the same kind, and out of the same series, are used for the issue of British, German, or Canadian international money orders. The amount of clerical work is also considerably reduced by the adoption of the new methods.

In an order payable in either country, the amount moreover is now stated in the denominations of the money of that country, postmasters having been provided with tables of conversion, so that the remitter who may be unable to make the calculations necessary for conversion is no longer left in uncertainty as to the exact value of his remittance in money of either country. This is a great improvement. The remitter who desires to send an exact sum, as in paying a debt or in making any small purchase, may do so and be left free from doubt as to whether he has sent the right amount.

The rate of commission to be paid by the postal administration of each country, respectively, on orders issued within it, to the postal administration of the other, has been reduced by the terms of the new conventions from one per cent. to three-quarters of one per cent. This reduction, with the diminution of the number and cost of the blanks necessary, and of the amount of clerical labor required, has enabled the postal administration of the United States, which in the adjustment of the international accounts is almost invariably found to be the debtor administration, to materially lessen the fees charged for the issue of British, German, and Canadian orders in this country.

A convention was also concluded at Washington, on the 29th of December, 1879, for the exchange of postal money orders between the United States and France and Algeria. With the object of preserving uniformity of system, the provisions of this convention have been made to conform, as far as practicable, in all essential respects to the modified conventions with the other countries above named.

The modified conventions concluded with the United Kingdom of Great Britain and Ireland, and the German Empire, as well as the new convention with the Republic of France, went into operation on the 1st of April, 1880, while the provisions of the modified convention with the Dominion of Canada took effect on the 1st of July, 1880. A copy of each of these conventions is hereto annexed.

A tabular statement, showing the fees or rates of commission formerly and those now charged for the issue of British, German, and Canadian international money orders, respectively, and also the fees for French international orders, will be found in the appendix marked E, (page 395).

The number of offices in the United States authorized to issue money orders for amounts payable in Switzerland, and to pay orders for sums remitted from that country, was 183 on the 30th of June, 1879. During the last fiscal year two offices were added to the list, making the total number in operation on the 30th day of last June, 185.

The number of orders issued in this country for payment in Switzerland during the year was 7,603, amounting to \$130,601.56, of which amount \$339.44 was repaid to remitters; and the number originating in that country and paid here was 2,710, amounting to \$78,661.80. The amount of fees received for Swiss international orders issued in this country was \$3,735.50. As compared with the transactions of the previous year, these figures show an increase of \$34,430.31, or nearly 36 per cent., in the issues; of \$22,831.09, or nearly 41 per cent., in the payments, and of \$977, or about 35 per cent., in the fees.

The number of offices in the United States authorized to issue money orders for amounts payable in the United Kingdom of Great Britain and Ireland, and to pay orders for sums remitted from the United Kingdom, was 1,021 on the 30th day of June, 1879. During the last fiscal year 172 offices were added to the list, making the total number in operation on the 30th day of June last, 1,193.

The number of orders issued in this country for payment to beneficiaries in the United Kingdom was 116,773, amounting to \$1,625,942.95, of which amount \$2,616.04 was repaid to remitters; and the number originating in the United Kingdom and paid here was 18,912, amounting to \$338,095.45. The amount of fees received for British international orders issued in the country was \$46,989.90. These figures show, in comparison with the totals of similar transactions of the preceding year, an increase of \$731,083.70, or nearly 82 per cent., in the issues; a decrease of 7,670.64, or a little over 2 per cent., in the payments, and an increase of \$19,236.90, or a little over 69 per cent., in fees.

The number of offices in the United States authorized to issue money orders for amounts payable in the German Empire, and to pay orders for sums remitted from Germany was 673 on the 30th of June, 1879. During the last fiscal year 35 offices were added to the list, and 2 were discontinued, leaving 706 in operation on the 30th day of June, 1880.

The number of orders issued in this country for payment in the German Empire during the last year was 63,885, amounting to \$1,014,461.89, of which amount \$3,287.31 was repaid to remitters; and the number originating in Germany and paid here was 22,655, amounting to \$637,157.03. The amount of fees received for the German international orders issued in this country was \$25,800.35. Comparing these amounts with the figures representing the total amount of German international money-order business transacted during the year ended June 30, 1879, there is shown an increase of \$184,673.33, or a little over 22 per cent., in the issues; a decrease of \$2,385.65, or nearly four-tenths of one per cent., in the payments, and an increase of \$2,873.35, or about twelve and one-half per cent., in fees.

The number of offices in the United States authorized to issue money orders payable in the Dominion of Canada or in Newfoundland, and to pay money orders drawn in Canada or in Newfoundland, was 375 on the 30th day of June, 1879. During the last fiscal year 60 offices were added

to the list, making the total number in operation at the close of the year, 435.

The number of orders issued in this country for payment in the Dominion of Canada or in Newfoundland was 25,985, amounting to \$511,616.58, of which amount \$2,065.14 was repaid to remitters; and the number originating in Canada or in Newfoundland and paid here was 23,213, amounting to \$422,729.67. The amount of the fees received for Canadian international orders issued in this country was \$11,573.20. Compared with the figures representing the business of the previous year, these amounts show an increase of \$195,332.60, or nearly 62 per cent., in the issues; of \$83,657.22, or nearly 24½ per cent., in the payments, and of \$4,355.40, or a little over 60 per cent., in fees.

The number of offices in the United States authorized to issue money orders for amounts payable in the Kingdom of Italy, and to pay orders for sums remitted from that country, was 143 on the 30th of June, 1879. No change in the list of such offices occurred during the following year.

The number of orders issued in this country for payment in Italy was 6,935, amounting to \$167,853.56, of which amount \$134 was repaid to remitters; and the number originating in that country and paid here was 450, amounting to \$13,791.07. The amount of fees received for Italian international orders, issued in the United States, was \$4,482.25. A comparison of this business with that of the previous year exhibits an increase of \$64,501.45, or over 62 per cent., in the issues; of \$3,750.38, or over 37 per cent., in the payments, and of \$1,722, or over 62 per cent., in the fees.

The number of offices in the United States authorized to issue money orders payable in France or in Algeria, and to pay orders drawn in those countries, was 1,193 on the 1st of April, 1880, the date on which, by mutual agreement, the system of exchange of money orders between the United States and the Republic of France was put in operation. No change in the list of such offices was made within the remainder of the year.

The number of orders issued in this country for payment in France or in Algeria during the three months ended June 30, 1880, was 821, amounting to \$13,385.79, of which amount \$20 was repaid to remitters. The number of orders originating in France or in Algeria, and paid here within the same period, was 210, amounting to \$5,103.70. The amount of fees received for the orders issued in this country was \$243.

#### INCREASED ISSUE OF FOREIGN MONEY ORDERS.

It is worthy of notice that during the fiscal year ended June 30, 1880, a very large increase took place in the amount of money orders issued in this country payable in the United Kingdom of Great Britain and Ireland, in the German Empire, and in the Kingdom of Italy. The aggregate amount of orders drawn on Great Britain during that year was



82 per cent. more than during the preceding year; of orders on Germany it was 22 per cent. more, and of orders on Italy the increase was 62 per cent. But during the fiscal year 1879 the increase in the issue of orders on Great Britain, as compared with the corresponding issue of the previous year, was only 10.86 per cent.; of orders on Germany 5.92 per cent.; and in orders drawn on Italy there was a decrease of 2 per cent.

This remarkable increase in the amount of international orders issued in the United States during the last fiscal year is to be attributed to two causes: a general revival of business in this country, which gave employment at good wages to the working classes, and a failure of the crops and consequent distress in European countries, which induced the destitute and the needy to apply for aid to their relatives and friends in the United States. In this connection it may be proper to state that the greater number of international orders are issued for sums sent by one member of a family to another, while, on the other hand, inland orders are largely used for making small purchases, paying subscriptions to newspapers, magazines, &c., and for other miscellaneous purposes.

#### FOREIGN MONEY-ORDER ACCOUNTS.

The Auditor for this department is not prepared to furnish at the present time an exact statement of the revenue derived from the transactions of the international money-order business of the last fiscal year, inasmuch as a final adjustment of the accounts of the last quarter of that year has not been reached by him and the proper accounting officers of the different foreign countries between which and the United States money-order conventions are in force. The revenue and expense accounts for the year ended June 30, 1879, are stated by him as follows:

##### Swiss account:

Amount of fees received on orders issued .....	\$2,758 50
Amount paid for commissions and clerk hire .....	\$903 58
Amount paid for incidental expenses .....	10 65
Amount of excess of commissions paid Switzerland .....	390 43
Cost of exchange .....	33 10
Net revenue .....	1,420 74
	<hr/> \$2,758 50

##### British account:

Amount of fees received on orders issued .....	\$27,753 00
Amount paid for commissions and clerk hire .....	\$19,718 47
Amount paid for incidental expenses .....	59 46
Amount of excess of commissions paid Great Britain .....	5,474 98
Cost of exchange .....	1,909 91
Net revenue .....	590 18
	<hr/> \$27,753 00

##### German account:

Amount of fees received on orders issued .....	\$22,927 00
Amount paid for commissions and clerk hire .....	\$12,058 22
Amount paid for incidental expenses .....	106 99
Amount of excess of commissions paid Germany .....	2,465 50
Cost of exchange .....	1,720 45
Net revenue .....	6,575 84
	<hr/> \$22,927 00

**Canadian account :**

Amount of fees received on orders issued.....	\$7,217 80
Amount of excess of commissions received from Canada.....	131 38
	<hr/>
	\$7,349 18
Amount paid for commissions and clerk hire.....	\$1,577 52
Amount paid for incidental expenses .....	378 69
Cost of exchange.....	48 66
Net revenue.....	2,344 31
	<hr/>
	\$7,349 18

**Italian account :**

Amount of fees received on orders issued .....	\$2,760 25
Amount paid for commissions and clerk hire.....	\$347 54
Amount paid for incidental expenses .....	7 85
Amount of excess of commissions paid Italy .....	934 86
Cost of exchange.....	270 90
Net revenue .....	699 10
	<hr/>
	\$2,760 25

**GENERAL FINANCIAL RESULT.**

The whole number of domestic and international money orders issued during the fiscal year ended June 30, 1880, was 7,461,909, and the whole number paid was 7,281,757; the former amounting to \$103,816,681.16, and the latter to \$101,012,235.46.

The apparent net revenue of the domestic money-order system, as reported by the Auditor and hereinbefore stated, was \$257,575.08. There were, however, certain expenses which were paid out of general appropriations, and were therefore not taken into account in the Auditor's statement of the revenue accruing from the domestic money-order business. They may be itemized as follows :

Salaries to 36 employés in the superintendent's office.....	\$40,327 86
Salaries to 101 employés in the money-order division of the Auditor's office..	116,280 00
Stationery furnished for use in the superintendent's office .....	418 90
Books, blanks, printing, and stationery for use in the money-order division of the Auditor's office.....	5,741 64
	<hr/>
Total .....	\$162,768 40

And to these may fairly be added, as being among the expenses incurred, the cost of books, blanks, and printing ordered from the Public Printer by the money-order office of the Post-Office Department prior to June 30, 1880, but not paid for until after the close of the fiscal year, \$19,406.97. Deducting the total amount of these items, \$182,175.37, from the amount of revenue reported by the Auditor, there remains the sum of \$75,399.71, representing actual profit.

There is an item of expense inseparable from the transaction of the money-order business, the amount of which it is not practicable to ascertain; that is, the cost to the department of transmitting advices of orders from the issuing to the paying postmasters over railway, steamboat, and star routes. It may be suggested, however, that the department is

in some degree indemnified for this expense by the postage paid by the remitter on the money-order which he sends by mail to the payee.

The sum of \$269,205.25, being the net proceeds of the domestic money-order business for the fiscal year ended June 30, 1880, and of the international money-order business of the previous year as reported by the Auditor, was deposited in the Treasury for the service of the Post-Office Department on the 27th of September, 1880, in accordance with section 4050 of the Revised Statutes of the United States.

#### FOREIGN MAILS.

The total weight of the mails dispatched during the year to countries and colonies of the Universal Postal Union (the Dominion of Canada excepted) was 659,271,237 grams, or 1,453,601 pounds. The weight of the letter mails was 123,446,071 grams, or 272,181 pounds, and of printed matter and samples of merchandise 535,825,166 grams, or 1,181,420 pounds, being an increased weight over the year 1879 of 45,125 pounds of letters and 202,152 pounds of printed matter and samples.

Of the letter mails dispatched, 127,472 pounds (46.83 per cent.) were sent to Great Britain and Ireland, 64,943 pounds (23.86 per cent.) to Germany, 57,952 pounds (21.29 per cent.) to other countries of Europe, and 21,813 pounds (8.02 per cent.) to Postal Union countries and colonies other than European.

Of the printed matter and samples dispatched, 563,034 pounds (47.66 per cent.) were sent to Great Britain and Ireland, 243,840 pounds (20.64 per cent.) to Germany, 225,481 pounds (19.08 per cent.) to other countries of Europe, and 149,065 pounds (12.62 per cent.) to other Postal Union countries and colonies.

The number of letters exchanged with foreign countries and colonies not embraced in the Universal Postal Union, exclusive of Canada, was 770,574, of which number 448,735 were sent to and 321,839 received from such countries, being an increase, as compared with the last fiscal year, of 45,235 letters sent and 33,566 letters received from non-Union countries.

#### COST OF OCEAN MAIL SERVICE.

The amount reported for payment of the sea conveyance of United States mails dispatched during the fiscal year 1880, including 10,276 francs and 59 centimes (\$1,983.38) credited to France in quarterly accounts with the French Postal Administration for the conveyance of United States mails by the French line of packets from New York to Havre, was \$198,667.46, a decrease, as compared with the cost of the same service in 1879, of \$240.60. Of this amount, \$155,891.27 was paid for the trans-Atlantic service, \$12,672.09 for the trans-Pacific service, and \$30,149.10 for the services to and from the Isthmus of Panama,

Central America, and the South Pacific; to Mexico, to Cuba and Porto Rico; to and from other West India Islands; to Brazil, to Venezuela, to Canada, and Newfoundland, and from Uruguay. Particulars of these several services are appended (see page 13, appendix).

The additional sum of \$12,175.24 was reported for payment on account of the Atlantic sea conveyance of the British and Australian closed mails from New York to Great Britain from October 1, 1878, to September 30, 1879, for which amount credit was claimed by this department in the quarterly accounts with the British office, making the total payments on account of sea transportation of mails to foreign ports \$210,842.70.

The aggregate amount of the quarterly balances paid to this department during the year on settlements of postage accounts with other Postal Union administrations was \$75,172.17, and the aggregate amount of the quarterly balances paid by this department during the year to foreign postal administrations was \$17,552.94, showing an excess of \$57,619.23 in favor of the United States on settlements of Postal Union postage accounts.

The payments made to this department by other Postal Union administrations for the United States territorial and sea transit of closed mails amounted to \$116,399.25, and the payments made by this department to other Postal Union administrations for the foreign territorial and sea transit of United States closed mails amounted to \$51,397.74, the excess in favor of the United States on transit accounts being \$65,001.51.

#### ADMISSIONS TO THE UNIVERSAL POSTAL UNION.

The following countries and colonies have been admitted, since the last annual report, to the Universal Postal Union established by the Convention of Paris:

1. The United States of Venezuela, admitted from January 1, 1880.
2. The Republic of Ecuador, the Republic of Uruguay, the British Colony of the Bahama Islands (West Indies), and the offices of Grand Bassam and Assinie—dependencies of the French Colony of Gaboon, admitted from July 1, 1880.
3. The Dominican Republic (San Domingo), admitted from October 1, 1880.

The Republic of Hayti has also declared its adhesion to the Universal Postal Union, to take effect from April 1, 1881.

#### THE FOREIGN MAIL SERVICE IN 1880 COMPARED WITH THAT OF 1876.

The countries forming the General Postal Union on the 30th June, 1876, were as follows:

The United States, Austria-Hungary, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, France (including Algeria), Germany (including the island of Heligoland), Great Britain and Ireland (including Gibraltar, Malta, and the dependencies of Malta), Greece,

Italy, Luxemburg, Montenegro, Netherlands, Norway, Portugal (including the island of Madeira and the Azores), Roumania, Russia (including the Grand Duchy of Finland), Servia, Spain (including the Balearic Isles, the Canary Islands, the Spanish possessions on the North Coast of Africa, and the postal establishments of Spain on the West Coast of Morocco), Sweden, Switzerland, and Turkey.

The accessions to the Postal Union since June 30, 1876, have been as follows:

The Argentine Republic, the Principality of Lichtenstein (subordinate to the postal administration of Austria), the Bahamas, the Bermudas, Brazil, the British Colonies on the West Coast of Africa (Gold Coast, Lagos, Senegambia, and Sierra Leone), the British Leeward Islands (Antigua, Dominica, Montserrat, Nevis, St. Christopher, and the Virgin Isles), British Guiana, British Honduras, British India (Hindustan and British Burmah), and the Indian postal establishments of Aden, Muscat, the Persian Gulf, Guadur, and Mandalay, the Principality of Bulgaria, Canada, Ceylon, the Danish Colonies of St. Thomas, St. John, and St. Croix, the Dominican Republic, Ecuador, Nubia and Soodan, [as part of Egypt], the Falkland Islands, the Principality of Monaco, [as part of France], the French postal establishments at Tunis and Tangier (Morocco), at Shanghai (China), and in Cambodia and Tonquin, the French Colonies in Asia, Africa, America, and Oceanica, the island of Cyprus (subordinate to the postal administration of Great Britain), the Ionian Isles, [as part of Greece], Greenland, the Republic of Honduras, Hong-Kong, and the Hong-Kong post-offices at Kiang-Chow, Canton, Swatow, Amoy, Foo-Chow, Ning-po, Shanghai, and Hankow (China), and Hanoi (Tonquin), the Republic of San Marino, and the Italian post-offices at Tunis and Tripoli in Barbary, [as subordinate to the postal administration of Italy], Jamaica, Japan, and the Japanese post-offices at Shanghai, Chee-foo, Chin-Kiang, Hankow, Ning-po, Foo-Chow, New-Chwang, Kiu-Kiang, and Tien-tsin (China), and Fusampo (Corea), Labuan, Liberia, Mauritius and its dependencies, Mexico, the Netherland Colonies in Asia, America, and Oceanica, Newfoundland, Persia, Peru, the Portuguese Colonies in Asia, and Africa, Salvador, the Republic of Andorra (subordinate to the Spanish postal administration), the Spanish Colonies in Africa, Asia, America and Oceanica, the Straits Settlements, the island of Trinidad (West Indies), Uruguay, and Venezuela.

The reduction effected in the rates of letter postage to the above-named countries and colonies by their entrance into the Postal Union varies, according to destinations, from eight to twenty-eight cents per single rate.

A table is annexed (see page 14 appendix) showing the dates of the adhesion of the above-named countries and colonies to the Postal Union.

Almost all the countries and colonies of the world maintaining organized postal services are now embraced in the Universal Postal Union. The principal countries and colonies of postal and commercial impor-



tance not yet embraced in the Union are the Central and South American States of Nicaragua, Guatemala, Costa Rica, United States of Colombia, Bolivia, Chili, and Paraguay; the Sandwich Islands, New Zealand, and the British Colonies in Australia. Chili and the United States of Colombia have recently taken preliminary measures for entering the Union at an early date, and it is confidently expected that all the other countries and colonies now outside the Union will adhere thereto, thus realizing the grand idea and aim of the founders of the Union of forming, for purposes of international mail communication, a single postal territory embracing the world, with complete uniformity of postal charges and conditions of international exchange for all descriptions of correspondence.

The International Postal Convention concluded at Berne, in October, 1874, went into operation on the 1st of July, 1875, and began a new era in our correspondence with the rest of the world. Nothing, in my opinion, has contributed so much to a state of universal peace and amity, or to promote civilization and to disseminate truth and correct principles. It is a long step forward in the onward march of human progress. The brotherhood of man becomes thereby less and less a merely ideal relation.

A comparison of the operations of the foreign mail service during the year ended June 30, 1880, with those of the year ended June 30, 1876, shows the increase of correspondence sent to foreign countries to have been as follows:

	Pounds.
Weight of letter mails for year ended June 30, 1880, 123,446,071 grams=....	272, 181
Weight of letter mails for year ended June 30, 1876, 95,984,186 grams = ...	211, 631
Increase .....	60, 550
Weight of printed matter and samples for year ended June 30, 1880, 535,825,- 166 grams = .....	1, 181, 420
Weight of printed matter and samples for year ended June 30, 1876, 366,- 552,486 grams = .....	808,462
Increase .....	372, 958

A like comparison shows the reduction made in the cost of sea transportation of United States mails to foreign countries to have been as follows:

Amount paid for sea conveyance of U. S. mails sent to foreign countries during the year ended June 30, 1876, including \$537,500 paid for contract services to Japan and to China and Brazil.....	\$755, 279 88
Amount paid for sea conveyance of mails sent during the year ended June 30, 1880 .....	198, 667 46
Decrease .....	\$556, 612 42

#### MODIFICATIONS OF POSTAL UNION ARRANGEMENTS AND DETAILS.

Special arrangements have been concluded with the postal administrations of Great Britain and France, extending the limits of weight and

dimensions prescribed by Article V of the convention of Paris, for packets of samples of merchandise, so as to admit such packets to circulation in the mails between the United States and Great Britain and France, respectively, when not exceeding the weight of 350 grams (12 ounces), and the dimensions of 30 centimeters (12 inches) in length, 20 centimeters (8 inches) in width, and 10 centimeters (4 inches) in depth. Copies of these arrangements are appended. (See pages 15 and 16, appendix).

The postage on newspapers addressed to countries and colonies of the Universal Postal Union has been reduced to a charge of one cent for each weight of two ounces or fraction of two ounces, the same as for other articles of printed matter for the same destinations, thus dispensing with the exceptional rate for newspapers of 2 cents for each weight of four ounces or fraction thereof, authorized by Article XXVI of the Regulations of Detail and Order for carrying into effect the Convention of Paris.

The provision of the second section of Article XVII of the Regulations for carrying into effect the Convention of Paris excluding from the reduced postage established for printed matter "all printed articles constituting the representative sign of a monetary value," has been construed by the International Bureau as applicable only to bonds, banknotes, commercial bills of exchange, &c., which have been fully executed by the makers, and therefore have, in themselves, a money-value; and as not applicable to the simple forms of such values, bearing neither signatures nor numbers of registration.

Detailed information on the following subjects, relating to Postal Union exchanges, will be found in the appendix, pages 18-21.

1. Table showing the equivalents, so far reported, according to which, in pursuance of Article 7 of the Paris Convention, postage rates are levied in countries of the Universal Postal Union which have not the franc for a monetary unit, and the fees charged for registration and return receipts.

2. A recapitulation of the regulations which determine in the different countries of the Universal Postal Union the length of time for retaining in the offices of destination unclaimed correspondence addressed "*poste restante*".

3. A recapitulation of the regulations within the Universal Postal Union respecting the authority to stop letters of the international service before delivery to addressees, for return to the senders.

4. A statement showing the surtaxes (postage in excess of the general Union rates) charged in certain Union countries on correspondence addressed to the United States.

MODIFICATIONS OF POSTAL REGULATIONS AND DETAILS RESPECTING  
MAIL EXCHANGES WITH COUNTRIES AND COLONIES NOT YET AD-  
MITTED TO THE UNIVERSAL POSTAL UNION.

An agreement has been made with the General Post-Office of the British colony of Victoria (Australia) for the redirection and forwarding of correspondence from the United States to that colony, and *vice versa*, upon the application of the addressee, without the prepayment of any postage for reforwarding.

The provisions of the 3d paragraph of Article 4 of the Postal Conventions concluded with the colonial governments of New South Wales, New Zealand, Queensland, and Victoria, respectively, have been modified by reducing the United States territorial and sea transit charge from 25 to 15 cents per ounce on the letter mails forwarded by the said colonies, via San Francisco, to British Columbia and other British North American provinces, Mexico, Central and South America, or the West India Islands.

It has been decided that all publications defined by the act of March 3, 1879 as "Second Class," and subject to the same rate of domestic postage as newspapers, are entitled, under the provisions of the third paragraph of Article IV of the Postal Convention between the United States and the Hawaiian Kingdom, if conforming to the conditions prescribed for "second class matter" in domestic mails, to transmission in the direct mails to regular subscribers in the Hawaiian Kingdom at the United States domestic bulk or pound rates.

Instructions have been issued at the request of the Department of State for the despatch of correspondence for the Samoan Islands in direct mails from San Francisco as often as opportunity offers, addressed to the United States consul at Apia, that officer having been charged by the Secretary of State with the duty of receiving and distributing such mails at said consulate.

In order to decrease the amount of undelivered correspondence returnable from each country to the other, a reciprocal arrangement has been made with the General Post Department of Canada requiring postmasters in each country to notify the publishers of newspapers and periodicals in the other country when subscribers to such publications refuse to take them from the post-office, or neglect to call for them for the period of one month.

Instructions have been issued, at the request of the Postmaster-General of Canada, to treat as unmailable matter all publications termed "Police Gazettes," when addressed to the Dominion of Canada. Such publications are forbidden circulation through the mails of Canada on account of their obviously immoral tendencies.

## SUBJECTS REQUIRING LEGISLATION.—INDEMNITY FOR LOST REGISTERED MATTER.—THE PACKET POST.

I renew the recommendations of my predecessor for legislative authority to accept and to carry into effect the provisions of Article VI of the Universal Postal Union Convention concluded at Paris on the 1st of June, 1878, respecting the payment of a limited indemnity for registered articles of postal union origin and address which may be lost or stolen during their transmission through the mails; and also for such a modification of the provisions of section 17 of the act of March 3, 1879, as will authorize the adoption by the Secretary of the Treasury and the Postmaster-General, of regulations providing for the delivery by mail to the addressees at the offices of destination in the United States, subject to payment of customs duties thereon, of any packet of dutiable mail matter received in the mails from foreign countries. A bill providing the necessary legislation for both of these objects passed the Senate at its last session, and is now pending in the House of Representatives. Its passage at the approaching session of Congress is earnestly recommended to enable this department to execute an important provision of the Convention of Paris relating to registered correspondence lost or stolen in the international mails, and also to extend to dutiable articles of mail matter received from abroad the same facilities of transmission to destination and delivery to the addressees as are extended to dutiable books received by mail from postal union countries, under regulations adopted by the Secretary of the Treasury and the Postmaster-General in pursuance of the authority given for that purpose in section 17 of the act of March 3, 1879.

The authority to transmit and deliver dutiable articles of mail matter to addressees through the mails, subject to payment of the customs duties thereon, should not be restricted to such mail matter as is now exchangeable in the Universal Postal Union mails, but should embrace all articles of dutiable matter received in the mails from other countries. This is necessary to enable this department to conclude special arrangements with other postal administrations for exchanges by "parcel-post" of small objects of merchandise, embracing many articles which, under existing postal conventions and arrangements, are not transmissible in ordinary mails.

A *projet* of an arrangement for an international exchange of small objects of merchandise, submitted by the delegates of Germany, was discussed at the Congress of Paris; and, although the commercial advantage from such an exchange was generally acknowledged, certain difficulties connected with tariff regulations prevented its adoption by the Congress, but it was agreed to refer the subject to the International Bureau for consideration. Recently the International Bureau invited a postal conference of representatives from the different postal union

administrations to meet at Paris to consider this *projet*. The postal administrations of nearly all the countries of Europe were to be represented at that conference, but this department was unable, in the absence of legislation authorizing such service, to take part in the conference, or to become a party to any international parcel-post arrangement. For the same reason, this department has declined a proposition submitted by the German administration for a special exchange of small parcels between the two countries by means of the direct lines of German mail steamers. Such exchanges would greatly promote commercial interests, and can be conducted without loss of customs revenue under regulations similar to those adopted for the transmission by mail to addressees of dutiable foreign books, if authority shall be given by law to adopt the same regulations in respect to all articles of dutiable mail matter received from abroad.

#### ENCOURAGEMENT TO AMERICAN OCEAN STEAMERS.

It is not doubted that regular and frequent mail steamship communication with Mexican, Central American, South American, and trans-Pacific ports would prove an important auxiliary to American commerce, and I think it would be a wise measure of public policy to encourage by appropriate legislation the establishment, by our own citizens, of American lines of steamers to such of said ports as will in the judgment of Congress promote our commercial interests. The postages on the mails conveyed (the limit of compensation authorized by law to be paid for the transportation of mails to foreign ports) afford for the trans-Atlantic routes, where heavy mails are conveyed, an adequate compensation for the services performed, but for the mails transported by sea to Mexico, Central and South America, and trans-Pacific ports, the correspondence being small in bulk, the postages thereon furnish a wholly inadequate remuneration for the service. I therefore think it would be a wise measure so to amend the general law on the subject as to authorize the payment by the Postmaster-General of a just and reasonable compensation, within a prescribed maximum limit, and commensurate with the importance of the services performed, to such lines of American steamers as may be employed under contract with this department in transporting the mails of the United States to Mexican, Central American, South American, and trans-Pacific ports.

#### FOREIGN MAIL STATISTICS.

The estimated amount of mail matter exchanged during the year with foreign countries, based upon the counts of such matter taken at the respective United States offices of exchange during the first seven days of October, 1879, and April, 1880, is as follows :

Total number of letters .....	34, 579, 702
Total number of single letter rates .....	39, 809, 996



Total number of postal cards.....	1,708,362
Total number of packets of newspapers, other printed matter, and business papers.....	29,835,360
Total number of packets of samples of merchandise .....	362,500
Total number of registered articles.....	625,494

The estimated amount of postages collected thereon in the United States is as follows :

On prepaid letters <i>sent</i> .....	\$922,882 94
On unpaid and insufficiently paid letters <i>received</i> .....	80,462 02
On postal cards <i>sent</i> .....	22,449 84
On newspapers, printed matter, samples, and business papers <i>sent</i> .....	299,707 01
On insufficiently paid newspapers, &c., <i>received</i> .....	4,680 82
<b>Total</b> .....	<b>\$1,333,182 63</b>

The estimated amount of registration fees on registered articles sent to foreign countries is \$22,630.

The estimated amounts of unpaid postages are as follows :

On unpaid letters <i>sent</i> .....	\$12,655 00
On unpaid newspapers, &c., <i>sent</i> .....	355 16
<b>Total unpaid postages on mails <i>sent</i></b> .....	<b>\$13,010 16</b>
On unpaid letters <i>received</i> .....	\$80,462 02
On unpaid newspapers, &c., <i>received</i> .....	4,680 82
<b>Total unpaid postages on mails <i>received</i></b> .....	<b>\$85,142 84</b>

The excess of unpaid postages collected in the United States on mail matter received over the amount of unpaid postages on mail matter sent was \$72,132.68.

For other details respecting the count upon which the above estimates are based, see page 22, appendix.

#### LOTTERY LETTERS IN THE MAILS.

In the last annual report of the late Postmaster-General it was suggested that, as by the act of July 12, 1876 (19 Stat., p. 90), section 3894 Revised Statutes was amended by striking out the word "illegal," preceding the word lottery, it would seem proper, for the sake of consistency and to render the legislation on the subject harmonious and effective, that the word "fraudulent" as it occurs in sections 3929 and 4041 Revised Statutes, preceding the word "lottery," be also stricken out. The suggestion I desire to renew for the consideration of Congress. In the recent decision pronounced by the Supreme Court of the United States in the case of *Stone vs. The State of Mississippi*, in discussing the question whether a charter granted to a lottery company by the appellee was protected from hostile legislation on the ground that the charter constituted a contract between the State and the company, this language is used by the Chief Justice :

All agree that the legislature cannot bargain away the police power of the State. Neither can it be denied that lotteries are proper subjects for the exercise of this power.

There is now scarcely a State in the Union where lotteries are tolerated, and Congress has enacted a special statute, the object of which is to close the mails against them.—Rev. Stat., sec. 3894; 19 Stat. 90, sec. 2.

The question is therefore directly presented, whether, in view of these facts, the legislature of a State can, by the charter of a lottery company, defeat the will of the people authoritatively expressed in relation to the further continuance of such business in their midst. We think it cannot. No legislation can bargain away the public health or the public morals. The people themselves cannot do it, much less their servants. The supervision of both these subjects of governmental power is continuing in its nature, and they are to be dealt with as the special exigencies of the moment may require. Government is organized with a view to their preservation, and cannot divest itself of the power to provide for them. For this purpose the largest legislative discretion is allowed, and the discretion cannot be parted with any more than the power itself.

That Congress, while expressly forbidding the use of the ordinary mail to all lottery companies, whether fraudulent or not, should intend to afford the special security of the registry system and the convenience and safety of the money-order system to persons engaged in employments declared by the Supreme Court of the United States to be “demoralizing in their effects, *no matter how carefully regulated*,” unless express proof of fraud can be made against such companies, is not to be assumed. Congress will not intentionally aid in demoralizing the public by affording extraordinary postal facilities to persons or companies whose business accomplishes this result. The views which controlled the action of my predecessor are expressed in a letter, written by him the 12th of June, 1880, in answer to inquiries by the consul-general of Spain regarding the action of the department in restraining the agents in this country of the Havana lottery in their attempted use of the registry and money-order systems in the business of their agency. I make the following extract from the letter referred to:

The laws of the United States declare: It shall not be lawful to convey by mail, nor to deposit in a post-office to be sent by mail, any letters or circulars concerning lotteries, &c.—Sec. 3894 Revised Statutes (19 Statutes, p. 90).

Under this statute the department refuses to carry any known lottery matter, whether of Louisiana, Kentucky, or Havana lottery companies. Sections 3929 and 4041 Revised Statutes authorize the Postmaster-General, upon evidence satisfactory to him, that any person is engaged in conducting any fraudulent lottery, &c., to forbid the payment to such person of money orders, or the delivery to him of registered letters.

Pending appeals to the Supreme Court of certain suits involving the interpretation of these sections of the statute, the Postmaster-General has suspended all orders which had been issued against lottery companies having a legal existence under charter in the United States, and an authority of law from any State in the Union to carry on their business, such authority being recognized as *prima facie* evidence that the company is not fraudulent; but such suspension does not authorize any such company to use the mails for lottery business.

The Postmaster-General has not suspended the orders issued against any lottery company claiming a foreign charter, such foreign law not being recognized as giving *prima facie* authority to any company to carry on its business in the United States. Lottery is not recognized as a legitimate business over which the comity of nations extends its protection, and therefore to exist legally and not fraudulently it must exist by force of positive law operative in the United States.

This statement of the rule controlling the action of the Post-Office Department meets my approval, and under the recent decision of the Supreme Court, to which I have referred, I have felt it to be my official duty, also, to give full effect to the action of any State legislature in its effort to relieve the public from the evil consequences of pernicious legislation in the past.

The suits begun by the agent of the Commonwealth Distribution Company of Louisville, the lottery company to which allusion was made in the last annual report of the Postmaster-General, have terminated favorably for the department. The bill brought by the complainant against the postmaster at Louisville was dismissed after hearing by the circuit court of the United States for that district. An appeal was subsequently taken by the complainant to the Supreme Court. Pending this appeal, new evidence was submitted to the department respecting the status of the company for which complainant in these suits was agent, and it having been made to appear to the satisfaction of the department that neither this company nor the so-called Kentucky State lottery were legally chartered and were therefore outside of the limitation laid down in the letter of the late Postmaster-General quoted above, new orders denying both the companies themselves and their agents the use of the money-order and registry systems were issued. These orders are now in force.

Shortly after proceedings were begun by the Louisville company, M. A. Dauphin, the president and acting secretary of the Louisiana State lottery, against whom the late Postmaster-General had issued an order under the provisions of sections 3929 and 4041 of the Revised Statutes, filed his bill of complaint against the late Postmaster-General, by name, in the supreme court for this district. The complainant's bill, among other things, attacked the constitutionality of the statutes upon which the Postmaster-General had acted, and asked an injunction against the further execution of the order. The court affirmed the constitutionality of the law\* and dismissed complainant's bill, from which decision an appeal was taken to the Supreme Court.

The appeal of the Louisville company has since been dismissed on their own motion, and that of the Louisiana company postponed for future consideration, grave doubts being entertained as to whether the case has further legal standing, inasmuch as the relief asked is against the late Postmaster-General, *eo nomine*.

Before leaving this subject I renew the suggestion made by my predecessor respecting the carriage by the mail of newspapers containing lottery advertisements.

#### THE RAILWAY MAIL SERVICE.

Attention is invited to the recommendations of the general superintendent of the railway mail service for a reclassification of the employés

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\* See Appendix, pages 529-542, for opinion of court.

of that service, a readjustment of their salaries, and for pensions to be paid to those disabled and to the families of those killed in the service by railway and steamboat accidents. The service to the country performed by these men in securing the prompt and accurate dispatch of the mails to their destination is no less valuable than that of the Army and Navy in protecting its coasts and frontiers, the dangers to which they are exposed are almost as great, as the annual list of casualties will show, and no good reason exists why they should not also be provided for when deprived of life or limb in the discharge of duty.

#### NEED OF A DEPARTMENTAL LIBRARY.

The Post-Office Department alone of all the executive departments in Washington is without a library. Its officers have constant need for reference of books relating to topography, geography, and kindred subjects upon which information may be required for the intelligent discharge of their duties, and its employes are deprived of the privilege enjoyed by those of other departments of free access to the best literature for their entertainment after office hours. The attention of Congress is respectfully called to this deficiency in the hope that it may be supplied.

#### THE ANNUAL COUNT OF MATTER MAILED.

For the first time in the history of the postal service of this country an actual count of all correspondence originating in the United States was made upon each of the first seven days of November, 1879. The results of this count will be found in tabular form upon pages 66-69, and the statement of the domestic postal business, given at the beginning of this report, based upon this count, may be accepted as almost absolutely correct, since it agrees very nearly with the statement of the superintendent of the railway mail service of the number of pieces distributed in transit by employes of that service, after deduction is made for matter redistributed and therefore counted more than once in his report. (See page 271.) This count will be made annually hereafter, the time having been changed to the first seven days of December, which it is believed will afford a better basis for computation of the year's work.

#### NEED OF ADDITIONAL CLERICAL FORCE.

Application has been made in the estimates submitted to the Secretary of the Treasury for an increased clerical force in the office of the Postmaster-General for the purpose of classifying and indexing the records of his office, so that they can readily be consulted. Special attention is called to the reasons given in the estimates for asking this increase.

The Second Assistant Postmaster-General urges the necessity of an increase in the clerical force of the Contract Office to insure the careful, prompt, and thorough dispatch of the business of the department.

It is not economy to have the clerks in charge of business requiring patient investigation and study, and in which large sums of money are involved, taxed to their utmost capacity, for it is clear that the work cannot be brought to the highest state of perfection under such circumstances.

The clerical work of the Contract Office has been greatly increased, without a corresponding increase in the force, and I recommend that provision be made for the additional clerks and change of grades asked in the estimates submitted.

#### CHANGES IN LAWS.

The important changes which have been brought about in the laws governing the compensation for the transportation of the mails during the past four years are briefly mentioned by the Second Assistant Postmaster-General in his report (page 82). These changes, while protecting the interests of the government, have been highly beneficial to the public, and the adoption of the suggestions now made by him will still further systematize the service, and wisely control, by law, the expenditure of many millions of dollars.

#### SUITS AGAINST POSTMASTERS.

Attention is again called to the suit brought by Christopher C. Campbell against the postmaster at New York, which is now pending upon appeal before the Supreme Court. Suit has recently been brought by the same person against several other postmasters upon the same ground, viz, alleged infringements of letters patent for an improvement in post-office postmarking and canceling stamps, which stamps are furnished to postmasters by the department. It is again requested that before final judgment is had postmasters should be placed under the same legal protection given to Treasury officials against levy upon their private property under judgments for acts done in their official capacity, and under orders of the department.

#### POSTMASTERS' SALARIES.

Attention is respectfully invited to the appended letter from the postmaster at Boston, Mass. (page 545), in which he presents his reasons for desiring an increased salary for himself and certain other postmasters.

#### POSTAL SAVINGS.

One of my predecessors some years since recommended the incorporation into the department of a system of postal savings. The subject has from time to time occupied the attention of Congress. For several years the system has been in operation in the United Kingdom of Great Britain and Ireland, and in Canada. When in London recently, Her



Majesty's Postmaster-General kindly gave me facilities for observing the management of his department. I learned that the postal savings system had been remarkably successful, and had constantly grown in popular favor. As managed in that country, it is a source of some profit to the government.

In this country, I incline to the belief that the system would have advantages even greater than in a compact population like that of Great Britain. The subject will be found intelligently discussed by a gentleman connected with the Money-Order Office upon page 379, of the appendix.

Wealth, public and private, consists largely of the savings of production over consumption, small in detail, but enormous in the aggregate. In by far the larger portion of the United States there are no savings depositories, and are not likely to be. To the people of these parts the use of the post-office for this purpose would be a real boon. It would be an additional advantage that deposits would be available at any depository office in the United States, an important consideration with a people so migratory as ours. It is believed the system would interfere little with the business of the savings-banks, but would absorb funds not now deposited in them. Nor would the patronage of the government be sensibly increased, since the system would be operated by persons already in the public service, with no considerable addition to the number. Your attention and the attention of Congress is respectfully invited to it.

#### POSTAL TELEGRAPHS.

During my visit to the British post-office, I examined with much interest the system of telegraphy for several years past connected with the postal service. This method of correspondence is thought to have made a great advance since it was changed from the management of private corporations, responsible to nobody, hardly to public opinion, and placed under the control of the government. The business has increased many fold, the cost of sending messages has been largely reduced, and the service is performed in localities it would never have reached under the pecuniary stimulus of private enterprise. At the same time it yields a margin of profit to the royal treasury. Is it not time for us to renew the inquiry whether it is wise to leave this important instrument of correspondence in charge of corporations whose primary object is gain to the managers and stockholders, and the convenience of the public secondary only?

#### DISPOSAL OF VALUELESS PAPERS ON FILE.

Attention is again invited to the recommendation of the Auditor (page 554) that authority be given by Congress for the destruction or sale as waste-paper of the vast accumulation of files having no perma-

ment value. Unless such authority be given, this mass of valueless papers will soon accumulate to such an extent as to interfere very seriously with the public business. The room which they now occupy is much needed for other purposes, and the surrender of additional space in the department building for their storage will put the service to great inconvenience.

#### NEED OF A NEW DEPARTMENT BUILDING.

That part of the General Post-Office building lately occupied by the city post-office has been refitted for occupancy by employes of this department, but the additional rooms thus provided are insufficient to accommodate comfortably the present clerical force of the Post-Office Department and Sixth Auditor's Office. The basement story of the building was fitted up a few years ago for use by the clerks and employes of the department, supplying many additional rooms, but the increase of the clerical force has been so great that every room in the building is now occupied, and many of them so overcrowded that the work of the department is conducted with great inconvenience.

The business of the Post-Office Department is constantly increasing with the growth and extension of the postal service of the country, and requires for its direction and management a constantly increasing force of clerks. There is at the present time urgent need of a new building of ample dimensions for conducting the business operations of the department, and this necessity will become more and more urgent every year.

My predecessor, Postmaster-General Creswell, in the month of January, 1873, addressed a letter to the chairman of the Committee on Public Buildings and Grounds of the House of Representatives, transmitting a plan and design of the Supervising Architect of the Treasury Department for providing additional rooms by fitting up the basement story of the building; and although recommending its adoption by Congress in order to provide the increased number of rooms required at that time, he clearly foresaw the necessity of a new building, and expressed himself as "decidedly of opinion that the best arrangement for the government would be to erect a new Post Office building on another site, of ample dimensions to accommodate the prospective increase of the clerical force of the department for the next fifty years, and transfer the present building to the Interior Department, which is now obliged to rent private buildings for the accommodation of a large portion of its clerical force."

In January, 1873, the force of officers, clerks, and other employes of the Post-Office Department, the Sixth Auditor's Office, and the city post-office was reported as numbering 628 persons. Now, the employes of the Post-Office Department and of the Sixth Auditor's Office, exclusive of those of the city post-office, who have been transferred to a private building, number 758 persons, a very large increase of the clerical

force in the short period of seven years. But nothing shows so clearly the rapid extension of our postal service as a comparison of the revenues of the Post-Office Department. Making this comparison by decades, we find that, in 1850, the revenues were \$5,499,984.86; in 1860, the revenues were \$8,518,067.40; in 1870 the revenues were \$19,772,220.65, and in 1880 the revenues were \$33,315,479.34.

It is apparent from the foregoing facts and considerations, that the early construction, in this city, of a more commodious building for the use of the Post-Office Department is a necessity; and as several years must elapse before such a building can be erected, no time should be lost in taking the initiatory steps for its construction. When it is built and ready for occupancy by this department, the present building may be transferred to the Interior Department, or devoted to such other public uses as Congress shall determine. I therefore earnestly recommend that the necessary legislative action may be taken on this important subject at the approaching session of Congress.

#### THE WASHINGTON CITY POST-OFFICE.

My predecessor, in his last annual report, alluded to the fact that the building known as the Seaton House had been leased for the term of five years for the use of the Washington City post-office. It is extremely desirable that the unexpired term of this lease should be devoted to the erection of a suitable building for the city post-office, and I recommend that an appropriation be granted for that purpose.

#### GENERAL CONDITION OF THE POSTAL SERVICE.

The postal service is so intimately connected with every public and private interest that its efficiency, like the purity of the air we breathe, is not demonstrated by popular applause so much as by the absence of complaints; the general public cares only to know that its correspondence is conveyed to its destination with certainty, celerity, and security, and pays little attention to the methods by which these ends are attained. Measured by this criterion, the postal service of the United States has no superior in the world, and it is proper that record be made of the influences and improvements which have, especially during the past few years, so greatly contributed to its efficiency.

Among the greatest improvements of the service is the abolition of distributing post-offices, and the enforcement of close and thorough distribution of all mail matter in transit upon the railroad lines, thereby expediting the delivery of matter to all parts of the country by many hours. A necessary consequence of this innovation was the subordination of all postmasters in everything affecting the distribution and dispatch of mails to the General Superintendent of Railway Mail Service and the division superintendents under his orders, thus securing uniformity of practice.

The report of the Superintendent of Railway Mail Service shows that during the past year only one piece of matter out of every 3,482 handled by the employés of that service was incorrectly distributed. Every such error was promptly detected and the employé who committed it notified of the fact.

The classification of mail matter has been so changed as to correspond very nearly with that of the Universal Postal Union, and the reduction of the rates of postage on a large class of correspondence has been followed by no decrease of revenue.

The privilege of registration, previously restricted to letters, was extended in 1878 to all other mail matter, and the registry system has been greatly improved by the introduction of through registered pouch exchanges and other means to secure the safety of registered matter, so that the loss for the past year was only one out of every 6,258 pieces handled. Some of the improvements of the registry system and a full account of its work, as well as a comprehensive review of the progress of the postal service during the past few years, will be found in detail in the report of the Third Assistant Postmaster-General hereto appended (pages 312-326).

Above all should be mentioned the *esprit de corps* which has been made to inspire the officers and employés of the postal service to such an extent that, with rare exceptions, each and all appear to feel the same personal interest in the improvement and success of the service as though it were to their individual profit.

#### CONCLUSION.

The department has from the beginning exhibited a continual growth corresponding with the development of the country, and at the same time a constant improvement in methods and results. It has been the unvarying aim of the administration to correct abuses, to remedy defects, and to secure increased efficiency. In the future, I am persuaded, no efforts will be spared to bring the service to the state of ideal perfection, when nothing intrusted to it shall be lost or even delayed.

I have the honor to be, sir, very respectfully, your obedient servant,

HORACE MAYNARD,

*Postmaster-General.*

The PRESIDENT.

# PAPERS

ACCOMPANYING

## REPORT OF THE POSTMASTER-GENERAL.

### REPORT OF THE FIRST ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,  
OFFICE OF THE FIRST ASSISTANT POSTMASTER-GENERAL,  
*Washington, D. C., October 20, 1880.*

SIR: During the last fiscal year the business of the appointment office was greater than that of any previous year. A larger number of post-offices was established, and a more voluminous correspondence relating thereto was received and dispatched. A comparative statement of this work with that of previous years would be unnecessarily tedious, but an idea of the vast labor performed in this office may be obtained from the following reference to what was accomplished by its several divisions:

#### APPOINTMENT DIVISION.

The number of cases, of all kinds, made up were .....	14,808
Number of cases acted upon affirmatively .....	13,620
Number of cases declined .....	650
Number of queries sent out affecting the establishment, discontinuance, &c., of post-offices .....	7,614
Number of circulars of inquiry, &c., mailed .....	21,540
Number of letters written .....	3,468
Number of cases referred to other bureaus of the department or to correspondents for information .....	13,948
Number of Presidential cases acted upon .....	524
Number of post-offices placed in charge of sureties on account of death of postmasters, or for other causes .....	32
Number of clerks in the division .....	11

#### BOND DIVISION.

The business of this portion of the office, which is almost wholly one of records and reports, was largely increased during the past year.

The number of entries made upon the books of the division were .....	28,576
Number of cases received, for which appointment and other papers were mailed .....	14,492
Number of circulars sent, calling for execution of new bonds .....	1,956
Number of surety circulars sent to chief post-office inspector .....	1,558
Number of blank assistant and clerk's oaths sent by request of postmasters .....	4,247
Number of new bonds sent by request of postmasters .....	416
Number of new bonds sent by request of office Third Assistant Postmaster-General for increase of penalty .....	256
Number of new bonds sent by request of money-order office .....	338
Number of circulars sent sureties who requested to be released from bonds .....	872
Number of letters received from sureties, requesting to be released as bondsmen .....	936
Number of cases in which post-office inspectors recommended new bonds .....	274
Number of circulars sent to sureties notifying them of postmasters failure to deposit or pay contractors .....	351
Number of new bonds received .....	2,176



Number of reports received from post-office inspectors on validity of bonds...	1,560
Numbers of assistant postmasters and clerk's oaths received, indorsed, and filed .....	22,370
Number of bonds and oaths returned for correction.....	1,066
Number of bonds examined.....	13,456
Number of bonds filed.....	13,123
Number of corrections in postmasters' names reported to corresponding clerks.	1,417
Number of commissions mailed to postmasters .....	11,650
Number of commissions and new bonds reported to the office of the Third Assistant Postmaster-General .....	13,393
Number reported to the auditor for Post-Office Department.....	13,393
Number reported to the money-order office.....	2,243
Number of letters written.....	409
Number of clerks in the division .....	13

Accompanying this report will be found tables, marked A and B, giving additional information concerning the operations of this division.

#### SALARY AND ALLOWANCE DIVISION.

In addition to the routine work of this division, the biennial readjustment of the salaries of postmasters as required by law at offices of the first, second, and third classes, was made to take effect from July 1, 1880. The number of salaries so readjusted was 1,764, and the sum necessary to pay the increase thereon amounted to \$97,500.

During the year 280 special readjustments of salaries of postmasters were made in accordance with the postal laws.

Besides these cases, 147 offices of the fourth class were reported by the auditor at which the annual compensation of the postmasters, exclusive of commissions on money-order business, had each reached \$1,000, or more. Of this number, 93 were subsequently found to be entitled to assignment to a higher grade. The number of post-offices of the third class relegated to the fourth class in consequence of a decrease of business, was 59.

The number of letters received by this division during the year amounted to .....	4,968
Number of letters written.....	5,160
The number of allowances ordered for clerk hire at offices of first and second classes was.....	472
Total amount expended for clerical service in post-offices during fiscal year.....	\$3,567,793 02
Number of applications received during the year for allowances for clerical services which were declined.....	1,929
Number of post-offices at which there were allowances for rent, fuel, and light.....	392
Total amount allowed them.....	\$364,018 15
Number of applications for these items declined .....	223
Number of post-offices at which there were allowances for miscellaneous items .....	484
Amount allowed them .....	\$77,210 86
Number of applications for miscellaneous items declined .....	96
Number of post-offices at which allowances for furniture were made ...	166
Amount allowed them .....	\$16,678 12
Number of applications for furniture declined .....	546
Number of post-offices at which allowances for stationery were made ..	615
Amount allowed them .....	\$48,284 81
Number of applications for stationery declined .....	19
Number of cases referred to the chief post-office inspector for information .....	47
Number of applications of the railway mail service for allowances acted upon.....	76

A large amount of miscellaneous work not indicated by the above statements was also performed in this division.

Number of employes, 3.

## LETTER-CARRIER DIVISION.

During the fiscal year just ended the changes in the letter-carrier force, including changes of pay of carriers under the act of February 21, 1879, were 3,347. These changes involved the writing of the names of each carrier six times. They also involved the sending out of 1,972 blank bonds and oaths.

A new register of letter-carriers was made during the year, and a record kept monthly of the number of pieces of mail-matter collected and delivered at the free-delivery offices.

There were 2,533 letters written and an indefinite number of circulars sent out during the year.

Number of clerks employed, 2.

A very complete statement, in tabular form, of the business of this division will be found accompanying this report, marked C.

## BLANK AGENCY DIVISION.

The work of this division for the past fiscal year was of more than usual magnitude.

The greater part of what is termed "departmental supplies," *i. e.*, the necessary blanks, paper, twine, scales, and stamps, to enable postmasters to make up and forward mails, to record and report the same, as well as to account for the business of the officers to the department and to the Sixth Auditor of the Treasury, are sent from this division.

Of these "supplies" there were forwarded during the last fiscal year as follows:

Blanks for statements and accounts of postmasters.....	34,219,900
Books for records of post-office business.....	118,332
Facing slips for making up packages.....	32,746,120
Marking and rating stamps of all kinds.....	4,327
Of type (pieces).....	11,109
Of jute twine (pounds).....	359,330
Of hemp twine (pounds).....	86,236
Letter balances and scales and test weights.....	2,182
Of paper 20 by 25 inches (reams).....	22,043
Of paper 26 by 40 inches (reams).....	791

The blank agency division is also charged with the purchase and distribution of stationery for the department, and in keeping the accounts of the same with the disbursing officer.

One of its employes also keeps the records of the transactions of the department with the Government Printing Office, which transactions amounted during the past year to \$140,000.

Including the superintendent and assistant superintendent, the number of employes is 14.

A detailed statement of its operations will be found in the accompanying tables marked D and E.

## LEASE DESK.

This desk is in charge of one clerk only.

The number of leases for post-offices prepared during the last fiscal year was ....	68
Number of letters written.....	307
The number of cases referred to the chief post-office inspector requesting information concerning the same was.....	70
Number of post-office leases, including the leases of stations in the large cities in operation June 30 last, was.....	280

## LETTER-BOOK DESKS.

There were recorded during the year by the clerks in charge of these desks 19,009 letters, and, in addition thereto, more than 60,000 circulars are estimated to have been directed and mailed by them.

Number of clerks, 2.

## PRINCIPAL MESSENGER.

The number of letters, papers, requisitions, returns, and packages received by mail and express for this office during the last fiscal year, and opened and distributed by its principal messenger, amounted to 300,070.

One messenger and two assistants are employed in this office.

The above refers exclusively to the clerical work performed in the appointment office. By the organization of the department there is devolved on it a vast and responsible labor relating to the postal service outside. It is charged, as will be observed from the above statements, with the appointment of postmasters, and with superintending the expenditures necessary to meet the necessities of post-offices. The cost of maintaining this office proper comes out of the general treasury; the expense of the service outside is covered by the revenues of the department. The first is provided for in the legislative, executive, and judicial appropriation acts; the other, in the acts providing appropriations for the service of the department. All the appointments of railway post-office clerks, route-agents, local agents, and all other officers and employes engaged in the railway mail service, are determined in a division of this office, but a separate report thereof is made to you by the superintendent of the division. Under appropriate headings I submit my report of, and suggestions on, the outside work of this office:

## COMPENSATION TO POSTMASTERS.

The operations of this office have been embarrassed by scanty appropriations. In the item of compensation to postmasters the amount provided has been almost uniformly too small. Congress fixes the rate of compensation, and the time and manner of determining it, so that no discretion whatever is left in the execution of the law. Hence, the amount necessary to discharge the obligations of the department in this regard can neither be increased nor lessened by wise or lax administration, by honest or corrupt practices, and it would seem that appropriations should correspond with the requirements of law. Our estimates have heretofore been low, but the appropriations have generally been lower, while the amount actually required has frequently exceeded both the estimates and appropriations. The result has been that deficiencies were regularly reported to Congress after the obligation to pay attached and were regularly provided for. It would relieve the department and the auditing officer, as well as postmasters, to have such an appropriation as would certainly discharge the obligations provided by statute. The deficiency in this item during the past fiscal year amounts to \$158,407.54, which would have been avoided if the estimate for that year had formed the basis of appropriation. To meet the seeming desire of Congress to provide the smallest possible sum to pay postmasters during the current year (that ending June 30, 1881), the department's estimate was made \$450,000 less than that of last year, and the amount provided is \$50,000 less than the estimate. The expenditure will largely exceed the estimate, and a deficiency appropriation will hereafter be

necessary. I have tried to avoid this difficulty in the coming year by recommending a sum that will probably be sufficient (certainly not too great) to cover the aggregate demand upon it.

The late change in the mode of compensating postmasters at offices of the fourth class, by adjusting their pay upon the basis of stamps canceled instead of stamps sold, has cured many abuses that sprang up under the late system, and has added largely to the department revenues. The result fully justifies the long and persistent effort to effect the change, and I therefore suggest that further legislation on the subject would be unwise.

#### CLERKS IN POST-OFFICES.

The appropriation under this head is entirely inadequate. In fact, it has been for years below the actual necessities of the service. The estimates therefor have not been sufficient, and yet the appropriations generally have not equaled the estimates, nor have the expenditures consumed the appropriations. It can also be safely said that the expenditures were not a proper criterion of the necessities of post-offices. The knowledge that a safe disposition of this fund required a large margin of reserve, has prevented such allowances in advance as the judgment of the department really approved. It is difficult to keep the run of balances in this item, for the reason that the accounts of expenditures by postmasters are rendered quarterly, and reported to the department by the Auditor long afterward. In this way, unexpended balances are shown, such as "lapse fund," accruing in intervals between the vacation and subsequent filling of positions, the occasional use of minimum instead of maximum allowances to postmasters, &c., which are deceptive. For instance, the unexpended balance of \$32,206.98 of this appropriation for last year is the result of exceptional caution in authorizing its expenditure for the reasons briefly stated above. It is not evidence that it was not needed, but simply that abundant caution was exercised to prevent deficiency. During the time this unexpended balance was accumulating in post-offices, there were full fifteen hundred meritorious applications on our files for additional or original allowance, which could not be granted in the absence of information as to whether allowances already made to other offices would be reported used or "lapsed" at the end of the quarter.

The statutory restrictions upon the use of this appropriation are sufficient to prevent abuse. The right of postmasters to ask for it at "separating offices," where mail-routes intersect or diverge and where the legitimate labor of the postmaster in caring for the mails of his own patrons becomes burdensome by imposing on him the care and work of assorting mails for others, is clearly recognized. It is safe to say that scarcely a case can be found where the allowance will pay for the additional work thus imposed. Then again, in offices of the first and second classes, where the law authorizes the use of "the excess of box-rents and commissions" to meet the necessary expenses of the office, the appropriation is generally insufficient to comply with this plain provision. The obvious intent of the law in such cases is to reserve to the postmaster the entire amount of his salary without incumbrance by otherwise allowing him the amount necessary to pay for clerical help and other expenses. But the appropriations will not permit it, and the object of the law is thus defeated. Moreover, the public often suffers from the failure, for the postmaster very reluctantly and naturally hesitates to pay from his own earnings the amount necessary to a prompt

dispatch and delivery of mails, which the law obligates the department to do. A very large per cent., however (perhaps a majority), of such postmasters do exceed their allowances, and impose burdens on themselves, which should be borne by the department, in order to meet the requirements of the service. It will be conceded that a policy that produces such consequences is not right. Either the statutory promise to furnish clerical assistance should be met, or the law extending the promise should be repealed or modified. I do not regard the law as oppressive on the government, nor wrong in theory, and hence I deem it but just that the means to honestly execute it should be provided. I have therefore recommended that you estimate for an appropriation that will afford relief next year.

#### FREE DELIVERY.

If the law authorizing the establishment of the free-delivery system in cities whose population exceeds twenty thousand and at offices whose gross revenues exceed \$20,000 per annum shall be executed, a liberal appropriation therefor must be made. Great caution has been exercised in executing the law. The last year's extension of this service was greater than it can hereafter be, unless means shall be provided to keep up the ratio. It is probable that the national census will develop a population in several cities sufficient to make a demand for free delivery therein reasonable; and the prosperous condition of the business of the country will rapidly increase the number of post-offices whose gross revenues will bring them within the advantages of the law. As prosperity extends in the large cities and old locations of free delivery, the necessity for increasing the number of carriers there will also increase. The demand now from these places is largely in excess of our means to meet it, and the natural growth of the commercial business and postal needs will make it greater in the future. I have therefore suggested that you ought to estimate for an appropriation of \$2,700,000 for next year; an increase of \$285,000 over the appropriation for last year and of \$200,000 over that for the current year. This estimate will be moderate, certainly not excessive, if the discretion of the Postmaster-General under existing law shall be reasonably exercised.

#### RENT OF POST-OFFICES.

Only two other items of appropriation for this office need be specially referred to—that for rent of post-offices, and that for miscellaneous and incidental expenses. The law restricts allowances for all these expenses to offices of the first and second classes. Its provisions are scrupulously observed. The cost of renting buildings for post-offices rarely reaches the rent value of similar buildings in the same locations. It is frequently the case that the owner of a block of buildings in a town or city will offer a well-located and convenient room therein at a nominal price so that the remainder of his property may be enhanced in value by its proximity to a place that must be frequented by the whole population. To secure the location of the post-office it is also quite common for the business people in the neighborhood to contribute to the payment of the rent, and thus enable the owner to offer the use of his property at a price the department can afford to pay. No private business of any description could secure rents so cheaply. It is therefore entirely safe to provide appropriations sufficient to enable the department to comply with the evident intent of the law. In many cases—in a majority of them, in fact—the department does not contract for and enter into leases for a



term of years whereby it becomes solely responsible for the payment of rent. It makes a stated allowance therefor to the postmaster, generally insufficient to meet the entire cost of the building, and the postmaster contributes the remainder from his own pocket, or unites with business people adjoining who are anxious to secure the benefits arising from having the post-office in the immediate vicinity. It is believed to be unjust to provide by law for the assumption of such expense by the department and to be unable to meet it for want of sufficient appropriation. The citizen cannot use the post without paying for the privilege as the law requires. It is not right to accept contributions from him in an indirect manner, even where his own interests induce him to offer them, in order to bring the rent of offices within the means of the department. The department should pay its own expenses, and thereby become independent. Nor is it right to impose a burden upon the postmaster by requiring him to share the expense of maintaining a house when the law promises to do it for him. To correct some of these evils, I respectfully suggest that the estimate for "rent, light, and fuel" (the main item being rent) should be for an appropriation of \$500,000 the next year. The present appropriation is \$425,000, and is insufficient.

In this connection I call attention to the fact that the only authority for entering into leases for a term of years grows out of precedent founded upon the custom of the department, and from implication which arises from appropriations for rent. There is no statute in existence defining the authority of the Postmaster-General to contract for rent, nor in anywise fixing the terms of leases or the covenants to be incorporated in them. This is a loose way of meeting unavoidable obligations. It should be corrected by legislation. I respectfully suggest that Congress ought to affirmatively authorize the Postmaster-General to enter into written leases and to make verbal contracts for the use of buildings by postmasters, and at least to outline the conditions upon which such contracts shall be executed. The experience of the department will afford the basis of a proper law if Congress shall deem it wise to legislate upon the subject.

#### MISCELLANEOUS AND INCIDENTAL EXPENSES.

The appropriation for miscellaneous and incidental items is too small. It is intended to cover everything which cannot be specially provided for, and it is difficult to limit the expenditure by advance allowances. Only \$15,000 more is suggested for next year than is provided for the current one, and less than \$23,000 more than was used last year. That expenditure is not a gauge of what is needed, for the department was more cautious about exceeding the appropriation than it was about meeting the demands of the service under this head.

The proposed estimates for this office are herewith submitted in a separate communication.

I have the honor to be, very respectfully, your obedient servant,

JAS. N. TYNER,

*First Assistant Postmaster-General.*

Hon. HORACE MAYNARD,

*Postmaster-General.*

A.—Total operations of the appointment division of the office of the First Assistant Postmaster-General for the year ending June 30, 1880.

States and Territories.		Offices.			Postmasters.			
		Names and sites changed.	Appointments on change of names and sites.	Resigned and commissions expired.	Removal.	Deceased.	Total number of offices.	
Alabama	138	54	7	3	226	2	3	Total 1,328
Alaska					1			
Arizona	25	15	3	2	22	1		
Arkansas	125	63	31	15	197	27	13	
California	76	27	8		82	12	6	
Colorado	79	21	12	2	105	6	6	
Connecticut	11	2			38	4	1	
Dakota	125	32	31	4	65	12	1	
Delaware	4				8	1	1	
District of Columbia		1						
Florida	69	18	11	1	71	15	5	
Georgia	182	29	9	2	161	15	9	
Idaho	27	16	2		24	3		
Illinois	77	32	12	1	268	31	17	
Indiana	65	25	17	2	251	39	10	
Indian Territory	25	8			16	2	3	
Iowa	79	59	26	3	235	18	8	
Kansas	202	87	75	45	293	20	11	
Kentucky	100	42	23	6	268	19	8	
Louisiana	74	24	9	2	76	8	6	
Maine	19	11	9	3	66	7	6	
Maryland	38	12	30	3	64	3	7	
Massachusetts	19	3	6		45	1	5	
Michigan	97	24	20	9	156	16	9	
Minnesota	95	60	25	12	156	7	2	
Mississippi	76	26	17	9	107	24	9	
Missouri	158	63	27	16	316	42	21	
Montana	36	13	1	1	26			
Nebraska	125	47	45	24	126	19	4	
Nevada	15	5	1		16	3	1	
New Hampshire	6	1	3		28	2	2	
New Jersey	10	5	4	1	48	5	8	
New Mexico	29	17	5	1	35	4	2	
New York	53	27	15		211	32	27	
North Carolina	162	65	15	10	210	9	4	
Ohio	106	26	26	7	268	18	17	
Oregon	34	20	10	1	71	8	5	
Pennsylvania	130	23	28	2	333	27	15	
Rhode Island	4		6	1	9	1		
South Carolina	117	28	11	2	79			
Tennessee	124	36	25	8	232	2	4	
Texas	240	117	21	8	316	12	12	
Utah	20	6			30	6	2	
Vermont	4	1	2		29	3		
Virginia	111	48	25	7	193	11	21	
Washington	48	17	2	1	26	4		
West Virginia	69	25	20	4	141	2		
Wisconsin	55	32	11	1	148	21		
Wyoming	27	12	4	2	13	2		
Total	3,403	1,328	681	220	5,651	546	226	1,328

B.—Table showing the increase and decrease of post-offices in the several States and Territories; also the number of post-offices at which appointments are made by the President, and by the Postmaster-General, for the year ending June 30, 1880.

States and Territories.	Whole number of post-offices in the United States June 30, 1879.	Whole number of post-offices in the United States June 30, 1880.	Increase.	Decrease.	Number of postmasters appointed by the President, June 30, 1879.	Number of postmasters appointed by the President, June 30, 1880.	Increase.	Decrease.	Number of postmasters appointed by the Postmaster-General, June 30, 1879.	Number of postmasters appointed by the Postmaster-General, June 30, 1880.	Increase.	Decrease.
Alabama.....	1,060	1,144	84	....	22	16	....	6	1,038	1,128	90	..
Alaska.....	2	2	....	....	....	....	....	....	2	2	....	....
Arizona.....	75	85	10	....	3	4	1	....	72	81	9	..
Arkansas.....	835	897	62	....	8	9	1	....	827	888	61	..
California.....	840	889	49	....	49	50	1	....	791	839	48	..
Colorado.....	293	351	58	....	16	22	6	....	277	329	52	..
Connecticut.....	444	453	9	....	49	49	....	....	395	404	9	..
Dakota.....	278	371	93	....	6	8	2	....	272	363	91	..
Delaware.....	107	111	4	....	6	6	....	....	101	105	4	..
District of Columbia.....	6	5	....	1	1	1	....	....	5	4	....	1
Florida.....	309	360	51	....	7	7	....	....	302	353	51	..
Georgia.....	965	1,068	103	....	23	25	2	....	942	1,043	101	..
Idaho.....	90	101	11	....	3	2	....	1	87	99	12	..
Illinois.....	1,967	2,012	45	....	162	162	....	....	1,805	1,850	45	..
Indiana.....	1,610	1,650	40	....	72	74	2	....	1,538	1,576	38	..
Indian Territory.....	69	86	17	....	....	....	....	....	69	86	17	..
Iowa.....	1,466	1,486	20	....	97	101	4	....	1,369	1,385	16	..
Kansas.....	1,392	1,507	115	....	46	58	12	....	1,346	1,449	103	..
Kentucky.....	1,289	1,347	58	....	28	27	....	1	1,261	1,320	59	..
Louisiana.....	422	472	50	....	10	10	....	....	412	462	50	..
Maine.....	922	930	8	....	31	29	....	2	891	901	10	..
Maryland.....	670	696	26	....	13	15	2	....	657	681	24	..
Massachusetts.....	744	754	10	....	108	108	....	....	636	646	10	..
Michigan.....	1,323	1,396	73	....	81	86	5	....	1,242	1,310	68	..
Minnesota.....	959	994	35	....	31	40	9	....	928	954	26	..
Mississippi.....	654	704	50	....	20	18	....	2	634	686	52	..
Missouri.....	1,646	1,739	93	....	49	50	1	....	1,597	1,689	92	..
Montana.....	125	148	23	....	6	7	1	....	119	141	22	..
Nebraska.....	690	768	78	....	23	28	5	....	667	740	73	..
Nevada.....	115	125	10	....	11	11	....	....	104	114	10	..
New Hampshire.....	454	459	5	....	24	25	1	....	430	434	4	..
New Jersey.....	678	683	5	....	53	52	....	1	625	631	6	..
New Mexico.....	102	114	12	....	1	3	2	....	101	111	10	..
New York.....	2,920	2,946	26	....	186	189	3	....	2,734	2,757	23	..
North Carolina.....	1,361	1,458	97	....	13	13	....	....	1,348	1,445	97	..
Ohio.....	2,336	2,416	80	....	110	112	2	....	2,226	2,304	78	..
Oregon.....	357	371	14	....	7	9	2	....	350	362	12	..
Pennsylvania.....	3,337	3,444	107	....	130	126	....	4	3,207	3,318	111	..
Rhode Island.....	110	116	6	....	11	11	....	....	99	105	6	..
South Carolina.....	552	641	89	....	13	12	....	1	539	629	90	..
Tennessee.....	1,312	1,400	88	....	16	18	2	....	1,296	1,382	86	..
Texas.....	1,215	1,344	129	....	40	44	4	....	1,175	1,300	125	..
Utah.....	200	214	14	....	4	3	....	1	196	211	15	..
Vermont.....	494	497	3	....	21	20	....	1	473	477	4	..
Virginia.....	1,659	1,722	63	....	25	25	....	....	1,634	1,697	63	..
Washington.....	202	233	31	....	3	4	1	....	199	229	30	..
West Virginia.....	845	889	44	....	8	8	....	....	837	881	44	..
Wisconsin.....	1,317	1,339	22	....	62	60	....	2	1,255	1,279	24	..
Wyoming.....	60	75	15	....	3	3	....	....	57	72	15	..
Total.....	40,878	43,012	2,135	1	1,711	1,760	71	22	39,167	41,252	2,086	1

C.—Statement of the operations of the free delivery

Post-offices.	Carriers in service June 30, 1880.	Delivered.					
		Mail.		Local.		Registered letters.	Newspapers.
		Letters.	Postal cards.	Letters.	Postal cards.		
Akron, Ohio <i>a</i> .....	5	126, 576	44, 238	4, 707	4, 750	570	112 28
Albany, N. Y.....	30	2, 445, 048	463, 674	260, 712	246, 204	9, 176	1, 242, 941
Allegheny, Pa.....	11	1, 177, 271	209, 484	141, 759	87, 448	5, 553	824, 18
Atlanta, Ga.....	8	1, 032, 452	337, 980	75, 623	115, 911	20, 439	771, 124
Auburn, N. Y. <i>b</i> .....	6	85, 455	25, 967	10, 245	4, 538	229	62, 675
Augusta, Ga. <i>c</i> .....	6	177, 327	67, 743	12, 455	7, 557	2, 264	122, 25
Baltimore, Md.....	76	5, 683, 134	1, 146, 832	1, 172, 484	1, 047, 034	35, 645	2, 758, 629
Bangor, Me.....	4	285, 127	70, 269	22, 433	9, 686	3, 458	172, 287
Bloomington, Ill.....	6	444, 927	160, 336	25, 555	41, 681	2, 586	325, 126
Boston, Mass.....	180	11, 879, 247	3, 073, 334	5, 035, 637	2, 997, 463	58, 797	7, 982, 627
Bridgeport, Conn. <i>d</i> ...	7	223, 262	47, 612	25, 873	17, 389	1, 256	172, 417
Brooklyn, N. Y.....	110	5, 002, 882	1, 574, 003	1, 700, 076	1, 286, 851	37, 572	2, 454, 682
Buffalo, N. Y.....	36	4, 092, 033	602, 567	547, 193	480, 025	28, 037	2, 677, 886
Burlington, Iowa.....	7	620, 099	119, 481	42, 148	35, 917	3, 507	678, 982
Camden, N. J.....	8	776, 852	150, 481	56, 947	45, 907	1, 856	232, 123
Charleston, S. C.....	8	556, 396	129, 493	57, 969	75, 577	5, 823	252, 288
Chicago, Ill.....	187	23, 281, 258	4, 593, 710	4, 812, 301	2, 910, 531	236, 888	7, 788, 124
Cincinnati, Ohio.....	73	7, 830, 452	1, 372, 758	1, 746, 387	1, 141, 269	45, 048	2, 768, 267
Cleveland, Ohio.....	36	4, 365, 924	1, 219, 582	613, 953	415, 785	47, 564	2, 524, 288
Columbus, Ohio.....	14	1, 384, 930	389, 944	106, 218	110, 064	10, 500	891, 628
Covington, Ky.....	5	326, 550	92, 229	21, 992	19, 656	1, 475	214, 628
Dallas, Texas <i>c</i> .....	5	108, 521	23, 891	3, 904	2, 982	691	62, 675
Davenport, Iowa.....	8	718, 105	142, 718	49, 221	35, 300	4, 071	444, 672
Dayton, Ohio.....	12	1, 234, 511	375, 435	150, 029	93, 074	9, 563	794, 628
Denver, Colo. <i>e</i> .....	10	724, 617	125, 803	83, 921	58, 863	1, 091	322, 572
Des Moines, Iowa.....	7	801, 433	268, 358	74, 580	77, 671	4, 946	588, 222
Detroit, Mich.....	32	4, 975, 483	1, 006, 135	640, 416	298, 096	45, 412	2, 528, 888
Dubuque, Iowa.....	7	584, 495	193, 790	28, 787	31, 280	6, 423	412, 221
Easton, Pa.....	7	846, 263	373, 948	91, 545	92, 530	1, 658	554, 681
Elizabeth, N. J.....	6	473, 150	107, 809	70, 989	29, 238	1, 436	428, 682
Elmira, N. Y.....	7	808, 626	188, 519	50, 314	38, 000	6, 165	488, 222
Erie, Pa.....	7	779, 766	87, 711	65, 671	65, 817	1, 024	515, 288
Evansville, Ind.....	8	708, 135	231, 589	83, 001	40, 861	5, 462	611, 229
Fall River, Mass.....	6	545, 246	53, 818	30, 759	29, 468	787	438, 223
Fort Wayne, Ind.....	7	796, 262	101, 456	84, 479	81, 050	2, 686	625, 622
Galveston, Tex. <i>c</i> .....	6	289, 227	41, 258	14, 331	4, 993	2, 693	111, 675
Grand Rapids, Mich..	9	1, 205, 871	345, 526	124, 384	85, 064	9, 636	824, 622
Harrisburg, Pa.....	6	417, 152	147, 261	26, 675	29, 137	1, 631	482, 624
Hartford, Conn.....	11	1, 015, 958	250, 706	294, 885	190, 840	4, 845	1, 077, 789
Hoboken, N. J.....	4	276, 937	82, 154	19, 128	29, 689	1, 523	187, 288
Houston, Tex. <i>c</i> .....	5	158, 261	14, 605	6, 808	1, 339	768	22, 729
Indianapolis, Ind.....	30	3, 312, 341	680, 559	357, 209	319, 261	18, 162	1, 788, 288
Jackson, Mich. <i>a</i> .....	5	161, 053	60, 207	7, 854	7, 952	618	22, 622
Jersey City, N. J.....	22	1, 150, 175	238, 256	184, 673	167, 004	4, 182	222, 622
Kansas City, Mo.....	17	3, 001, 665	734, 171	226, 582	140, 247	30, 095	1, 222, 622
La Fayette, Ind.....	5	371, 895	131, 200	30, 404	17, 063	2, 315	222, 622
Lancaster, Pa.....	6	538, 943	132, 815	35, 435	30, 370	1, 725	262, 622
Lawrence, Mass.....	9	720, 632	82, 602	60, 965	69, 812	1, 451	488, 222
Leavenworth, Kana..	5	425, 395	80, 654	19, 179	15, 868	2, 525	222, 622
Little Rock, Ark. <i>f</i> ..	5	227, 290	40, 390	27, 302	22, 342	1, 289	94, 622
Louisville, Ky.....	32	3, 518, 985	818, 039	407, 611	488, 286	24, 967	1, 728, 288
Lowell, Mass.....	10	799, 835	141, 575	107, 057	73, 613	2, 025	427, 288
Lynn, Mass.....	8	661, 923	179, 155	47, 072	73, 193	643	488, 222
Macon, Ga. <i>f</i> .....	5	109, 827	43, 683	5, 934	2, 045	2, 738	22, 622
Manchester, N. H....	7	606, 071	166, 288	30, 859	40, 301	6, 474	222, 622
Memphis, Tenn.....	13	1, 272, 896	188, 841	50, 940	68, 847	12, 078	222, 622
Milwaukee, Wis.....	30	3, 695, 247	573, 005	452, 248	442, 846	24, 248	1, 622, 288
Minneapolis, Minn...	12	1, 081, 085	225, 785	19, 374	81, 622	7, 624	722, 122
Mobile, Ala.....	6	457, 883	108, 467	62, 632	52, 580	2, 789	222, 622
Nashville, Tenn.....	12	1, 284, 803	361, 764	85, 075	90, 736	22, 589	722, 622
Newark, N. J.....	24	2, 085, 028	639, 672	412, 749	332, 185	9, 580	1, 982, 288
New Bedford, Mass..	7	745, 185	76, 500	60, 692	31, 473	1, 631	411, 622
New Haven, Conn....	16	1, 042, 030	202, 677	164, 719	106, 245	2, 696	622, 288
New Orleans, La.....	47	1, 932, 479	342, 378	331, 342	238, 880	30, 074	1, 222, 288
New York, N. Y.....	470	48, 439, 788	7, 981, 455	27, 933, 020	11, 272, 165	412, 750	14, 624, 288
Norfolk, Va.....	6	685, 163	152, 480	57, 071	67, 018	2, 137	622, 288
Oakland, Cal.....	8	627, 157	90, 178	52, 205	49, 625	2, 080	622, 288
Omaha, Nebr.....	8	885, 173	168, 805	88, 131	86, 963	7, 839	622, 288
Oswego, N. Y.....	6	439, 743	114, 068	27, 781	22, 049	2, 366	222, 622
Paterson, N. J.....	7	569, 058	100, 504	59, 500	46, 714	2, 285	222, 622
Peoria, Ill.....	8	733, 830	242, 927	44, 761	37, 541	4, 171	622, 288

*a* Established March 1, 1880.      *b* Established April 1, 1880.      *c* Established November 1, 1872

system for the fiscal year ended June 30, 1880.

Collected.		Pieces handled.		Cost of service (including incidental expenses).		Postage on local matter.	
Letters.	Postal clerks.				Per carrier.		
77,665	28,214	89,849	448,256	89,080	\$1,220 44	2.7	\$340 00
1,404,709	453,799	250,738	8,843,874	328,198	38,223 50	2.8	974 41
970,412	174,453	211,006	3,801,406	318,318	8,356 12	2.0	850 88
561,071	201,553	56,021	3,207,456	408,424	5,001 18	1.4	710 14
80,458	18,010	8,175	271,549	45,254	1,282 84	4.7	212 81
183,866	48,876	23,849	608,881	101,147	3,083 23	5	810 84
8,009,877	2,567,184	236,444	23,884,303	311,925	68,000 44	3	820 12
347,100	129,130	40,080	1,071,548	267,867	3,401 50	3.3	850 87
230,830	113,286	76,710	1,442,135	240,258	8,100 00	3.5	850 00
10,348,886	4,847,253	2,814,508	54,318,314	292,034	188,418 45	3.1	867.04
171,003	44,520	19,547	724,700	163,537	4,513 00	6.3	844 73
4,711,806	2,008,207	723,320	21,420,700	184,780	25,070 28	4.5	804 27
2,008,700	1,221,210	401,827	12,700,000	353,253	34,421 16	2.7	850 14
438,843	131,542	100,137	1,064,708	301,244	8,404 75	2.1	772 11
208,843	86,413	52,704	1,828,115	228,284	8,325 34	3	905 67
438,084	130,001	70,700	1,822,541	227,818	8,821 00	3.2	852 02
28,778,882	7,022,002	6,480,500	85,913,130	450,459	170,165 33	2	800 97
8,208,540	1,710,634	754,842	24,817,617	300,830	68,419 04	3.1	950 84
2,851,342	1,218,306	690,835	14,006,882	301,575	25,200 49	2.5	877 97
812,403	327,125	127,511	4,100,329	307,180	11,276 00	2.4	803 41
183,871	48,015	21,001	900,020	180,120	4,302 14	4.7	800 43
314,902	41,000	13,843	372,380	74,464	2,000 33	8	506 31
310,503	190,000	44,024	1,084,863	223,023	8,000 79	3.6	850 10
830,000	374,130	411,878	4,173,575	347,780	10,500 00	2.5	873 43
231,253	81,486	42,945	1,833,151	183,315	5,252 25	2.1	825 22
886,892	222,006	181,180	3,111,177	444,454	6,279 74	3	807 11
2,187,573	681,850	300,179	12,714,112	307,310	38,825 79	2.4	808 74
510,727	204,031	60,837	2,073,211	200,173	5,304 00	3.5	787 71
608,180	204,781	407,948	3,291,271	470,181	5,000 05	1.8	847 00
244,723	88,058	34,004	1,478,048	240,341	5,231 30	3.5	871 87
307,165	83,080	46,301	3,921,512	274,502	5,731 88	3	818 84
207,884	88,542	30,255	1,815,143	278,440	6,304 15	3.2	800 50
484,800	203,111	83,711	2,351,064	203,858	6,825 88	2.7	700 73
300,154	31,031	36,000	1,304,278	227,370	5,100 00	3.0	850 00
570,753	114,003	54,194	2,438,204	348,473	8,180 07	2.5	804 24
210,449	63,180	24,647	708,761	128,127	2,611 83	4.7	801 97
929,800	202,882	113,150	3,924,234	430,050	7,526 23	1.9	830 25
102,542	72,004	18,300	1,207,205	214,544	5,120 35	4	854 72
749,352	182,406	102,004	3,878,870	352,716	9,350 00	2.4	850 05
130,303	55,478	8,345	707,577	178,804	2,410 00	4.8	802 50
43,150	9,843	5,815	207,400	58,402	2,248 48	10.0	649 70
1,808,117	753,002	283,629	9,328,546	310,805	27,800 02	2.0	920 87
88,171	29,293	6,001	420,183	85,212	1,200 44	3	253 80
608,403	245,440	83,200	3,281,128	140,104	17,000 51	5.4	817 57
1,340,221	509,300	301,500	7,501,770	440,104	13,200 94	1.8	780 17
222,243	103,280	44,000	1,304,708	256,042	4,250 00	3.3	850 00
160,630	50,540	22,841	1,320,211	221,006	4,504 82	3.4	704 85
740,752	162,466	78,508	2,352,800	261,443	7,000 18	3	777 80
422,247	82,400	68,237	1,443,313	200,083	4,497 57	3	800 51
172,914	56,382	15,006	658,830	131,768	2,235 80	3.1	647 16
2,374,657	884,208	450,840	10,001,103	324,100	30,120 07	2.8	972 00
504,500	128,844	58,973	2,327,610	232,702	5,521 14	3.6	852 11
463,000	180,040	65,247	2,170,173	271,272	6,900 75	3.2	802 50
80,801	20,384	20,138	395,450	79,080	1,823 57	4.6	364 71
278,606	101,064	41,565	1,847,572	203,830	4,544 21	2.4	654 80
534,557	113,803	80,010	2,712,646	208,005	11,122 42	4.1	858 57
1,014,875	404,801	370,439	6,068,502	322,286	27,490 97	2.8	910 67
008,172	204,640	85,021	3,250,505	288,175	10,073 00	3.1	850 00
005,801	134,830	317,722	2,340,200	380,015	5,117 12	2.2	852 85
520,250	187,520	104,220	3,644,127	303,670	8,144 46	2.5	765 37
1,172,422	473,807	225,123	6,944,834	271,519	22,577 00	3.4	940 70
370,623	84,220	39,252	1,838,035	202,082	6,216 70	3.3	800 10
820,300	137,306	125,175	3,480,407	218,717	14,001 00	4	878 05
2,268,077	500,022	775,152	7,761,730	165,100	44,157 57	5.7	920 52
104,200,154	25,004,804	2,100,004	249,164,160	510,137	411,000 00	1.6	874 00
728,805	224,725	88,004	2,429,204	405,357	4,767 07	1.9	797 51
432,372	80,007	72,046	1,447,000	230,804	6,601 25	3.6	836 41
202,205	511,730	58,440	2,465,820	200,242	7,100 00	2.0	800 81
205,000	84,305	51,642	1,319,000	219,800	5,150 51	3.0	854 41
245,035	120,801	65,117	1,000,277	209,754	6,243 78	3.3	871 77
608,002	197,245	112,252	2,320,571	201,072	7,020 15	3	877 85

Established September 13, 1879.      Established September 1, 1879.      Established January 1, 1880.



## C.—Statement of the operations of the free-delivery system

Post-offices.	Carriers in service June 30, 1880.	Delivered.					
		Mail.		Local.		Registered letters.	Newspapers.
		Letters.	Postal cards.	Letters.	Postal cards.		
Petersburgh, Va.....	6	470, 098	119, 565	18, 328	26, 958	3, 600	396, 770
Philadelphia, Pa.....	300	24, 722, 864	5, 155, 799	14, 661, 996	6, 393, 697	123, 792	14, 017, 414
Pittsburgh, Pa.....	34	2, 701, 973	628, 252	553, 692	409, 091	10, 788	1, 545, 799
Portland, Me.....	10	695, 005	192, 262	61, 426	94, 382	3, 126	752, 832
Portland, Oreg. <i>g</i> .....	5	158, 769	20, 068	16, 597	7, 289	1, 608	125, 655
Pottsville, Pa.....	4	266, 106	85, 466	25, 063	13, 924	1, 087	366, 334
Poughkeepsie, N. Y....	7	660, 186	85, 501	57, 630	45, 670	2, 090	558, 231
Providence, R. I.....	26	1, 371, 329	342, 468	285, 154	166, 857	4, 535	906, 963
Quincy, Ill.....	8	752, 279	222, 900	37, 692	61, 207	6, 521	443, 332
Reading, Pa.....	10	720, 870	193, 549	61, 562	63, 680	2, 184	473, 101
Richmond, Va.....	16	1, 362, 801	404, 849	108, 706	126, 276	13, 503	706, 309
Rochester, N. Y.....	24	3, 059, 445	449, 733	359, 206	323, 644	21, 009	1, 407, 958
Sacramento, Cal. <i>g</i> ....	5	211, 021	29, 337	16, 739	7, 915	162	140, 399
Saint Joseph, Mo.....	8	967, 964	256, 902	84, 881	63, 741	10, 535	743, 437
Saint Louis, Mo.....	117	11, 997, 265	2, 262, 524	1, 899, 466	1, 506, 603	116, 256	5, 608, 094
Saint Paul, Minn.....	12	1, 789, 536	403, 716	158, 221	132, 841	22, 547	1, 153, 512
Salem, Mass.....	6	395, 144	111, 001	30, 872	46, 329	471	449, 339
San Francisco, Cal....	58	4, 486, 817	453, 678	1, 923, 483	1, 231, 426	37, 240	2, 625, 572
Savannah, Ga.....	8	523, 346	126, 895	84, 232	81, 787	5, 601	371, 095
Springfield, Ill.....	6	478, 505	149, 600	24, 562	24, 029	2, 432	430, 546
Springfield, Mass.....	8	777, 566	230, 342	79, 461	52, 398	2, 699	387, 976
Springfield, Ohio <i>e</i> ...	6	244, 663	143, 606	22, 912	14, 829	1, 074	259, 676
Syracuse, N. Y.....	20	2, 009, 550	398, 746	246, 904	204, 477	8, 179	1, 262, 507
Terre Haute, Ind. <i>g</i> ...	8	528, 633	201, 138	34, 435	26, 530	3, 568	401, 080
Toledo, Ohio <i>g</i> .....	14	1, 072, 474	287, 513	143, 201	130, 241	8, 489	719, 187
Topeka, Kans.....	5	403, 241	101, 191	43, 897	27, 175	2, 280	266, 499
Trenton, N. J.....	6	440, 135	105, 039	38, 413	28, 353	1, 289	357, 235
Troy, N. Y.....	15	1, 871, 273	447, 572	301, 648	180, 519	4, 391	1, 030, 670
Utica, N. Y.....	12	1, 089, 926	305, 635	99, 307	64, 745	6, 275	591, 194
Washington, D. C....	52	3, 296, 669	522, 734	526, 510	307, 013	14, 212	2, 165, 286
Wheeling, W. Va.....	7	638, 431	212, 520	43, 929	38, 172	7, 388	422, 400
Wilmington, Del.....	10	683, 912	158, 894	87, 751	70, 954	2, 239	435, 927
Worcester, Mass.....	11	718, 433	184, 459	109, 373	114, 865	1, 992	546, 757
Total.....	2, 688	243, 914, 028	50, 046, 891	72, 245, 029	89, 020, 614	1, 806, 455	122, 316, 076
Amount paid special agents.....							

*g* Established October 1, 1879.

for the fiscal year ended June 30, 1880—Continued.

Collected.			Pieces handled.		Cost of service (including incidental expenses).			Postage on local matter.
Letters.	Postal cards.	Newspapers.	Aggregate.	Per carrier.	Aggregate.	Per piece.	Per carrier.	
						Mills.		
246,648	112,614	38,617	1,433,198	238,866	\$4,315 33	3	\$719 22	\$764 05
33,222,126	9,578,294	7,681,544	115,557,526	385,192	270,236 86	2.3	900 79	396,473 82
1,970,040	633,629	404,685	8,863,949	260,704	32,826 15	3.7	965 47	18,610 35
823,474	284,677	184,704	3,091,888	309,189	8,506 20	2.7	850 62	3,746 89
281,126	59,576	29,837	700,525	140,105	3,617 70	5.1	725 54	1,504 05
166,665	63,213	72,439	1,061,197	265,299	3,422 67	3.2	855 67	957 56
727,157	126,318	118,748	2,381,531	340,219	5,854 67	2.4	836 38	1,918 77
1,100,042	346,716	165,721	4,689,805	180,377	23,750 55	5	913 48	14,942 01
313,844	148,921	23,527	2,010,223	251,275	6,392 67	3.2	799 08	1,592 92
344,682	158,095	64,151	2,081,874	208,187	7,694 81	3.7	769 48	2,272 26
755,531	305,019	104,487	3,887,481	242,968	13,684 52	3.5	855 28	3,982 07
1,412,242	431,979	226,783	7,691,999	320,500	22,586 02	2.9	941 08	12,262 66
199,894	30,820	20,012	656,899	131,378	3,739 53	5.7	745 91	1,132 58
605,154	229,473	107,588	3,069,675	283,709	6,269 20	2	783 65	3,103 29
8,585,797	2,533,829	2,490,066	37,009,840	316,323	112,326 06	3	960 05	62,574 69
1,056,314	375,551	152,787	5,245,025	437,085	10,605 21	2	883 77	5,730 33
292,785	99,865	54,873	1,489,679	248,280	5,145 70	3.4	857 62	1,560 62
6,986,073	1,399,384	1,156,411	20,300,084	350,001	54,689 93	2.7	942 93	50,984 01
506,782	174,607	115,710	1,990,055	248,757	5,479 36	2.7	684 92	4,698 46
190,531	80,581	41,039	1,421,825	236,971	4,392 65	3.1	732 11	1,342 88
371,121	151,154	83,318	2,136,035	267,004	6,821 50	3.2	852 60	3,600 76
114,684	48,528	16,799	866,771	144,462	3,941 14	4.5	656 86	1,490 02
1,090,064	382,891	208,583	5,811,901	290,595	14,496 65	2.5	724 83	7,477 58
391,723	172,296	103,823	1,863,226	232,903	4,502 23	2.4	562 78	1,296 37
1,131,283	401,819	197,712	4,601,919	335,137	12,502 55	2.6	893 04	5,053 43
222,378	66,264	18,130	1,151,055	230,211	3,382 10	3	676 42	1,726 60
308,819	101,810	85,328	1,416,421	216,070	5,100 80	3.6	850 13	2,887 42
1,684,175	412,295	492,979	6,425,422	428,361	12,848 48	2	856 57	8,271 13
788,494	287,903	158,501	3,391,980	282,665	10,252 28	3	854 36	3,129 44
2,528,610	534,966	456,687	10,352,687	199,090	43,990 57	4.2	845 97	18,937 01
518,670	194,104	72,877	2,148,491	306,927	5,426 06	2.5	775 15	2,183 46
336,992	136,425	37,992	1,951,086	195,109	8,649 23	4.4	864 92	3,281 48
413,026	152,452	58,230	2,299,597	209,054	9,505 70	4.1	864 15	5,113 13
280,460,190	79,280,430	43,022,530	932,121,843	350,499	2,357,650 86	2.5	885 28	3,063,797 14
					6,042 28			
					2,363,693 14			

## REPORT OF THE SECOND ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,  
OFFICE OF THE SECOND ASSISTANT POSTMASTER-GENERAL,  
*Washington, D. C., Nov. 10, 1880.*

SIR: At the close of the last fiscal year, June 30, 1880, the annual cost of

### INLAND TRANSPORTATION

was as follows, viz:

For 1,118 railroad routes aggregating 85,320 miles in length.....	\$10,498,986
For 131 steamboat routes aggregating 23,320 miles in length.....	887,221
For 9,863 other routes, designated as "star" routes, aggregating 235,248 miles in length.....	7,321,499
Total cost.....	18,707,706

Compared with the state of the service at the close of the preceding year, the railroad routes show an increase of 59 routes in number of 5,329 miles in length, and \$931,396 in annual cost.

The steamboat routes show an increase of 19 routes in number of 2,080 miles in length, and \$132,833 in annual cost.

The "star" routes show an increase of 638 routes in number of 19,768 miles in length, and \$919,669 in annual cost.

### RAILROAD SERVICE—APPROPRIATIONS FOR 1881.

The estimated cost of the railroad service for 1881, as submitted in the last annual report, was \$10,000,000. The sum appropriated is \$9,316,000. The cost of the service in operation on the 30th June, 1880, was, as is elsewhere stated, \$9,237,945. The cost on the 30th September was at the rate of \$9,342,470 per annum, with 5,939 miles of new service upon which no adjustments of pay have been made. The number of miles of new service estimated for the first quarter of the present year embraced in the above was 1,277. Adding for the three remaining quarters of the year at the same rate will add 3,831 miles of new service, which, with the 5,939 miles of unadjusted service, will make a total of 9,770 miles, which at the lowest average (\$50 per mile) would add \$488,500, thus making the cost for 1881 about \$9,830,970. Adding to this the natural and usual increase in expense arising from other than new service the total cost will not fall much below the estimate, or \$10,000,000.

This relation of the expenditure to the appropriation would call for an additional appropriation, were it not that there is about \$700,000 due for service on certain Pacific roads indebted to the government, which is placed to the credit of the companies on the books of the Treasury Department, and which is not deducted from the current appropriation, and for this reason the amount available is believed to be sufficient to cover the cost of the service to June 30, 1881.

### ESTIMATE FOR 1882.

The increased cost of railroad transportation, as shown by the returns for the last 5 years, has been as follows, viz: For 1876 over 1875, 3.54 per cent.; for 1877 over 1876, 4.67 per cent.; for 1878 over 1877, 5.66 per cent.; for 1879 over 1878, 5.50 per cent.; for 1880 over 1879, 9.15 per cent.

The cost of the service on the 30th June last was \$9,237,945. And at that date there were 4,662 miles of service in operation on new routes, upon which the rates of pay had not been adjusted. This, at an average of \$50 per mile, would make \$233,100, which, with the amount already stated, gives a total of \$9,471,045 as the actual cost on the 30th June, 1880. And in this connection it should be explained that the close of the contract term in the Eastern States will necessitate the reweighing of the mails on the great trunk lines during the present year, and it is certain that there will be a large increase in the amount of mails carried, and a consequent increase in the cost per mile on these lines, so that the increase for 1882 over 1881 will be greater than the increase for 1881 over 1880. The cost of the service on the 30th September, 1880, was at the rate of \$9,342,470 per annum; which, with the 5,939 miles of unadjusted service, estimated at \$50 per mile, \$296,950, makes the total cost on the 30th September at the rate of \$9,639,020 per annum. For the purpose of estimating the cost for 1882, this sum is used as the basis, for the reason that it is the latest actual data obtainable. And with the expectation that there will be a greater increase in the mileage in 1882 than there was in 1880, and the certainty that there will be an increase in the weight of mails in 1882 over 1880, the rate of increase for 1882 is set down at about 14 per cent., or \$10,988,482. From this deduct the \$700,000 placed to the credit of the Pacific mails and not charged to the appropriation, and the amount necessary to be appropriated for the year ending June 30, 1882, will be \$10,288,482.

#### ESTIMATE FOR RAILWAY POST-OFFICE CARS.

In compliance with the requirements of the act of March 3, 1879, a table (F) is submitted showing the cost of the railway post-office service on the 30th June, 1879, the cost for the fiscal year ending June 30, 1880, and the reasons in each case for increase or decrease during the year.

The cost of the railway post-office cars on the 30th June, 1880, was at the rate of \$1,261,041 per annum. The appropriation for 1881 is \$1,366,000. As there will probably be no more than the ordinary demands for the extension of this service during the next fiscal year, the rate of increase is placed at about 7 per cent. of the appropriation for the current fiscal year, thus making the estimate for 1882 for the use of railway post-office cars \$1,460,000.

#### SPECIAL FACILITIES FOR FAST MAILS.

In the annual report for 1879, the need of an appropriation to be used in obtaining and maintaining special and necessary facilities upon the most important railroad lines was explained. The subject is of so much importance, especially to business communities, that I again venture to call particular attention thereto. As heretofore stated, the need for this specific appropriation grows out of the reductions in the rates of compensation required by acts of July 12, 1876, and June 17, 1878, coupled with the increasing demands which have been made on the railroad companies for the acceleration of trains and additional space.

The net reduction on railroad routes (other than land grant) by the two acts to which reference has been made, is  $14\frac{1}{2}$  per centum of the rates allowable under act of March 3, 1873. These reductions were made when the cost of labor and the material used in the construction of railroads was at the lowest point, and was, probably, in the matter of remunera-

tion, in a line with all other business transacted by railroad companies. These circumstances are now entirely changed, and it would be impossible to maintain the present high state of efficiency in the transportation of mails on the important lines if the pay was restricted to the rates of compensation fixed during the period of business prostration. Therefore the use of this special fund, which is a small sum compared with the annual saving under the reductions, has enabled the department to this time not only to maintain the service as it was in 1876, but to secure an important service on the great lines of the utmost value and importance to the people.

In view of all the circumstances I earnestly recommend that this appropriation be continued so long as the laws governing the compensation for the transportation of mails on railroad routes remain unchanged. The amount necessary to be appropriated for this purpose for the fiscal year ending June 30, 1882, is \$450,000.

#### STAR SERVICE.

The cost of transportation on star routes for the year was \$7,321,449. This was \$919,619 in excess of the expenditure for the same branch of service in the preceding year, and was also \$1,421,449 greater than the estimate submitted to Congress in December, 1878. The causes of this increase and the reasons which induced it may not inappropriately be briefly set forth.

The estimates for this and all other branches of the postal-service for the year beginning July 1, 1879, were, of course, determined during the months of October and November, 1878, and were therefore based upon the requirements of the country as impressed upon the department by the experience of the preceding year. They were in consequence what may be called "hard times estimates;" that is to say, the experience upon which they were based had been that of a time of depression in all branches of industry and traffic, and, consequently, an era of the most rigid economy in all directions of public expenditure. But the beginning of the year 1879, subsequent to the submission of these estimates, was marked by an unexampled revival in every branch of business, and a great flow of emigration to the western and southwestern States and Territories. The resumption of specie payments, restoring the confidence of capital and stimulating the enterprise of labor, expanded every industry, and as the quickened energies of the people sought new outlets of rapid development in the Territories, and particularly in those sections in which precious metals are mined, a large population was suddenly brought into the remote and almost inaccessible mountainous regions of Colorado, Nevada, &c.

A peculiarity of the mail service is its more intimate relation to the daily life of the individual citizen than is sustained by the operations of any other branch of the government. This is particularly true of the sparsely settled and newly developed regions of the West, where the comparative scarcity and expensiveness of telegraph communication renders business correspondence entirely dependent upon the mails for transmission. The Post-Office was therefore the first department of the government to feel the effect of the sudden impetus which resumption gave to the public prosperity and popular enterprise. From every quarter of the West and Southwest, and much of the South, came urgent and incessant demands for increase in facilities and greater celerity in the carriage of the mails. These demands reached the department in the usual form of petitions from the people and recommendations by their



representatives. The files of the department show that at no time since the foundation of the government have so many demands, or for so great an increase in amount and cost of service poured in upon the Second Assistant Postmaster-General in the same space of time as came to hand during the year 1879. To have been governed by the policy of the past and kept within the bounds of the appropriation granted for the year would have denied much clearly needed increase in the efficiency of this service. And appreciating the necessity of keeping pace with the business interests of the country, and, respecting the reasonable and urgent demands of the people directly concerned, it was determined to enter upon a new departure in policy of no less proportions than the assumption by the department of the responsibility of increasing the efficiency, and thereby the cost of this service, beyond the *pro rata* limits of the appropriation, trusting to the wisdom and patriotism of Congress for relief in the form of a supplemental appropriation at its session next following. The adoption of this policy compelled an appeal to Congress for an additional appropriation, which, after an exhaustive investigation into the methods of the department, was granted in sufficient sum to meet the requirements of the increased service.

The recommendations of this bureau, embodied in the report of the Postmaster-General for the last fiscal year touching modifications of the law relating to expedition of schedules so as to restrict the allowances to contractors in such premises within the limits of 50 per centum of the amount of the contract as it stood immediately prior to such expedition, instead of a sum *pro rata* based upon certain items prescribed by law as had obtained for many years, were also favorably considered by Congress, and a proviso to that effect inserted in the supplemental appropriation bill.

The star service, viewed as a principal means of mail transportation is, of course, like all other primitive modes of intercourse, doomed to give way and disappear before the steady march of the locomotive. Each year the number of great star routes will become less and the distances traversed by them shortened; and on all of these short routes the intelligence and enterprise of the people will demand and secure at least a daily mail.

The improvements in the star service during the last year are fully shown in the statistical tables accompanying this report; but I will add that, in pursuance of the liberal policy of your predecessor, this service is now (having gone into operation the first of July last) practically double what it was on the 30th June last in the States of Indiana, Ohio, Kentucky, Tennessee, Alabama, Mississippi, Georgia, North Carolina, South Carolina, and Florida. It is not yet what it ought to be throughout these great States, and in many others, or what it will be under a continued wise administration and generous legislation.

#### TEMPORARY SERVICE.

In consequence of the late period in the last session of Congress at which the appropriations for the current fiscal year were determined it was found impossible to issue the usual miscellaneous advertisement in the early spring. This failure in the advertisement has rendered it necessary to make an unusual number of temporary contracts. And inasmuch as temporary service is always secured at a larger cost than where an opportunity is afforded for competition, I have to recommend that where service is required upon new routes in advance of the regular yearly or half yearly advertisements the Postmaster-General, upon

failure to secure bids for mail service at rates that seem to him reasonable, be authorized to invite bids by advertisement for the space of three weeks in a newspaper at each terminus of the route, or if there are no such newspapers there in not exceeding three newspapers published nearest the terminal points of such route, being in all other respects governed by the laws concerning the letting of similar service under regular advertisement. I believe the adoption of some such provision as this will result in great saving to the department.

#### FAST MAIL TO HAVANA AND IMPROVED MAIL FACILITIES TO MEXICAN AND SOUTH AMERICAN PORTS.

In the report of last year reference was made to the desirability of a fast mail line between Cedar Keys, Key West, and Havana, in order to the advancement of the commercial interests of the United States.

Cuba, Mexico, and many of the important South American ports, because of their geographical relation, are in close alliance with this country in commercial affairs; and these important and rapidly growing interests should be guided into our own channels of trade. Other governments extend material aid to their steamship lines, so that they can compete successfully with ours for the carrying trade of our immediate neighbors, and consequently this country is made dependent upon these foreign vessels for such communication as our business interests with these neighboring ports render necessary, besides which this state of things leads a large source of wealth from the marts of the United States to enrich the merchants of other countries. It would be conducive to a change in this respect and in harmony with the latest expressions of the public will, if the recommendation of last year were made operative through the enactment of a law authorizing the Postmaster-General to contract for carrying the mails in American ships between the United States and such ports of the countries named as will, in his judgment, be most likely to promote the interests of the people of this country, at such a rate of pay per mile per annum as will be sufficient to secure the performance of the service.

#### CLERICAL FORCE.

I desire to commend to you the clerical force of this bureau as most efficient and worthy, and greatly overworked. And I have to again ask the following additions thereto: six clerks of the third class; four of the second; seven of the first; and four at a salary of \$1,000 each, and one laborer. Of the additional clerks asked for of the third class, five are required to take charge of corresponding sections for the care of star service; and one for a corresponding desk in the division of railway adjustment. These duties are now performed by clerks of class two, while all others employed in similar work are receiving not less than \$1,600 per annum. Of the four additional clerks asked for of class two, two are needed as bookkeepers on railroad and star routes, and two for such duty in the mail equipment division. Of the seven additional clerks of class one, three are needed as helpers to route registrars and four for duty in the mail equipment division. Of the four additional clerks at a salary of \$1,000 each, two are required as copyists on reports called for by Congress, and to aid in the work of the letting of contracts for star service, and other miscellaneous and important work, and two are required for duty in the mail equipment division. The additional force asked for is absolutely necessary in order to the orderly, prompt, and accurate transaction of the business of this office. The amount and

character of the labor required of a clerk in charge of a corresponding section requires thoughtful application, and more than ordinary executive capacity.

The law recognizing subcontracts, while most just and salutary in its effect, has of itself almost doubled the work of corresponding clerks, while the growth of the service has also added largely to the current work. This work should not be disposed of without deliberate and careful investigation, and to do it in any other manner would be detrimental to the interests of all concerned. In the estimate for 1881 the salary for the chief clerk of this office was placed at \$2,500 per annum, and the same was recommended in the annual report, and by letter to the Committee on Appropriations, but through inadvertence the estimate reported to the Secretary of the Treasury for this officer was \$2,000 per annum. I now earnestly renew the recommendation. In this estimate the salary of the chief of the division of inspection and the superintendent of railway adjustment is placed at \$2,250. This, too, was recommended by the Postmaster-General in letters to the Committee on Appropriations, for the reason that the chiefs of the other divisions in this department receive \$2,250 per annum, and there is no reason why there should be unfavorable discrimination in the case of these important divisions. In this estimate provision is also made for a chief of the division of mail equipment, at a salary of \$2,250 per annum. The intelligence, care, and responsibility required of the officer in charge of this division, render a less salary inadequate compensation for the service received by the government.

The following special reasons are submitted for the eight additional clerks asked for the mail equipment division: "From want of adequate clerical force this division is already overburdened with regular current business, continually augmenting; and there will be no diminution of it, aside from the extraordinary work of changing all the locks and keys, now in the service, as hereafter referred to more fully. Therefore it will be physically impossible to effect the change of locks and keys without an additional number of clerks for that work alone. It will require the employment of these eight temporary clerks; two for *eighteen months*, from the 1st January next, and six more for *twelve months* from the 1st July next, viz:

"Two clerks, as bookkeepers (having 10 large books of 600 pages each), to keep the records of issue.

"Two clerks to write up all blank instructions and to insert therein the exact number stamped on the key to be enveloped therewith.

"Two clerks (good and rapid penmen, to keep up with working gang), to write the addresses on the envelopes and packages, and number the same.

"Two clerks to check and duly file the receipts returned, to check the number of each key enveloped, and examine locks and keys before issue, besides assist in folding and packing, and to prepare corrected lists of post-offices, &c.

"It is assumed, also, that a laborer will be specifically assigned to this division, as his service for portage of boxes and heavy weights will be in constant requisition."

#### ESTIMATES—STAR SERVICE.

The cost of the star service for 1880 was \$7,321,449, which is \$919,619 in excess of the cost for the preceding year, or about 14.36 per cent. The appropriation for the current year is \$7,375,000, which does not more than cover the cost of the service now in operation, but to which

the expenditure for the remainder of the fiscal year will be carefully restricted. There are over 1,200 routes, established at the recent sessions of Congress, upon which proposals have been invited for carrying the mails to commence July 1, 1881.

Then the regular advertisement has been issued inviting proposals for carrying the mails on all star routes in New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and West Virginia, for the new contract term of four years commencing July 1, 1881. The intention is to give to such of these States as may need them facilities superior to those now in operation. The bids for the new service cannot reasonably be expected to be as low as those made in 1876, upon which the present service is being performed, and there will doubtless be many routes established at the next session of Congress in the West and Southwest upon which it will be necessary to establish service. In addition to these reasons, provision has been made during the past year for the performance of mail-messenger service, in the wagons constructed upon plans and specifications prescribed by the Department, in the cities of Wilmington, N. C., Charleston, S. C., Savannah, Ga., Chattanooga, Knoxville, Memphis, and Nashville, Tennessee, and Louisville, Ky. This service, because of the security it affords to the mails, is the only kind that should exist in the important towns and cities, and it is the intention to extend the same to points where most needed as fast as the appropriations will admit. The estimate for the ensuing fiscal year is placed at \$8,260,000, or 12 per cent. over the appropriation for 1881, and this sum it is believed will be sufficient to maintain the service as herein proposed.

#### STEAMBOAT SERVICE.

The cost of steamboat service for 1880 was \$887,221. The appropriation for the current year is \$900,000, which is \$100,000 less than the amount estimated to be necessary. The demand and necessity for steamboat service call for an increased appropriation for this item for the year 1882, and the estimate is therefore placed at \$1,000,000, which is a little more than 11.11 per cent. over the amount provided for the current year, being the same amount as was estimated to be necessary for the current fiscal year.

#### MAIL MESSENGERS.

The cost of mail-messenger service on the 30th June, 1880, was \$697,298. The length of railroad service in operation at the same date was, in round numbers, 85,000 miles. The cost of the mail-messenger service is therefore an average of about \$8 per mile of railroad routes. The new service for the current year will not, probably, fall below 6,000 miles, which, with the additional service for the year 1882, will make not less than 10,000 miles more service in 1882 than there was in operation in 1880. This applied to the mail-messenger service, at the relative cost of \$8 to the mile, gives \$80,000. It is believed, however, that \$753,000, which is an increase of \$55,702, or about 8 per cent. over the cost for 1880, will be sufficient for this object, inasmuch as a considerable amount of the service to new railroads will be in operation only a portion of the year.

#### MAIL EQUIPMENT DIVISION.

To supply current wants of the mail service during the year ended 30th June last, there were distributed, by the issue of 6,764 drafts on the



various depositories, 454,135 mail-bags, of which 71,543 were locked pouches (used for 1st-class matter), and 382,592 were canvas or tie sacks (used for 2d, 3d, and 4th class matter), being an increase in number of drafts of 1,056, and a decrease in number of mail-bags of 76,424 compared with the preceding year. There were also distributed by draft 292 mail catchers, 352 sockets, 298 handles, and 322 rubber springs for mail catchers. There were issued directly from this office, with instructions, 40,740 mail locks, 4,283 mail keys, 2,700 mail-key chains, 44,175 mail-bag cord clamps, and 15,350 mail-bag label cases. There were examined and tested also in this office 57,246 mail locks, 3,188 mail keys, 4,000 mail-key chains, 55,000 mail-bag cord clamps, 16,690 mail-bag label cases, and 1,554 brass tags.

The accompanying table (G) prepared for the appendix of the Postmaster-General's annual report shows that the total number of new mail bags of every description purchased and put into service during the year was 64,398, of which 10,963 were locked pouches and 53,435 were tie sacks, being, altogether, a decrease, compared with the preceding year, of 39,623 mail bags; that the number of mail catchers purchased, besides extra appurtenances thereto, was 300, and that the total expense of mail bags and mail catchers, including repairs, &c., was \$146,601.76, being a decrease in expense of \$23,664.50 compared with the preceding year.

The total number of mail bags repaired during the year was 363,352, and the total cost of their repairs was \$42,191.91; an increase in quantity of 6,825 and in cost of \$4,578.81 compared with the preceding year.

The total expense of mail locks and keys during the year ended 30th June, 1880, was \$14,728, being an increased expense of \$2,686.34 compared with the preceding year.

Proposals for furnishing new kinds of mail locks and keys were re-advertised for on the 22d June last, in compliance with the proviso annexed to the appropriation for "mail locks and keys" made by the act approved June 11, 1880. But as the further proceedings had with reference thereto do not properly appertain to the operations of this office during the fiscal year ended June 30, 1880, a statement of the same is reserved for the appropriate occasion for rendering an account of its operations during the fiscal year to be ended 30th June, 1881.

#### ESTIMATES FOR 1882.

The following are the estimates of the necessary amounts of appropriations for mail bags and mail catchers and for mail locks and keys for the fiscal year ending June 30, 1882, viz:

For mail-bags and mail-catchers.....	\$220, 000
For mail locks and keys.....	50, 000

The demand for mail-bags depends upon the amount of mail-matter to be moved; and therefore increases with the extension and development of the postal service.

With the current fiscal year the mail service has set in with largely increased demands for mail-bags, caused not only by the expansion of mail facilities, but also by the fact that thousands of old damaged mail-bags which were reclaimed and repaired from time to time for service during the last six years are at length rapidly giving out and falling into decay, and will require to be replaced with new bags during the present and ensuing fiscal years. It is apprehended from the increased expense, relatively, of the first quarter, just ended, that the amount



appropriated (\$185,000) for the current fiscal year, ending June 30, 1881, will be insufficient, without extreme and perhaps unwise economy, to supply the wants of the mail service during the year. The large reduction in the quantities of new mail-bags purchased during the year ended 30th of June last, compared with the preceding year, will, it is feared, claim compensation for it in the next year, and is another fact tending to strengthen the apprehension of future necessity for greater expense.

I conclude, therefore, that less than the amount here estimated would be greatly at the risk of seriously embarrassing the mail service, the demands of which are, from a multitude of incidents affecting them, variable, fluctuating, and impossible to be foreseen with exactness of amount, and yet such demands, in most cases, are of a nature too urgent to be refused or even deferred without imminent danger of interrupting or stopping the transmission of the mails.

The appropriation of \$100,000 for "mail locks and keys" was made for the specific purpose of substituting new, different, and improved kinds of mail locks and keys for the old kinds now in the service throughout the United States, after a readvertisement for proposals to furnish the same. But no appropriation was made for needful supplies, by repairs or otherwise, of the old kinds, which must of necessity be continued in the service until an equal quantity of the new kinds to take their place can be manufactured, inspected, and distributed, which will probably cover a period of two years.

There are now in the service 180,000 locks of one kind alone (the iron lock for the general mails), and the present appropriation will pay for only 105,000 of the new kind (the contract price of which is less than the price of the old kind), besides paying for the quantities needed of the other kinds of new locks contracted for in pursuance of the readvertisement of 22d June last. This leaves 75,000 iron locks of the new kind to be provided for in the next fiscal year, the cost of which, at 52 cents each, will amount to \$39,000; adding to this \$11,000 for repairs of old locks and for purchase under contract of a new of kind of through registered mail locks and keys, to be readvertised for again (because none suitable were obtainable under the last advertisement), the total amount required is \$50,000. By this amount of appropriation, together with the amount already appropriated for the current fiscal year (making up exactly the cost originally estimated by the department), the mail service can be fully equipped with the new kinds of mail locks and keys which the better security of the mails requires; and it may then be safely predicted that thereafter only very small annual appropriations will be required for mail locks and keys for many years to come.

#### RAILWAY MAIL SERVICE.

I commend to your attention the comprehensive report of the General Superintendent of Railway Mail Service. The business of that important branch of the service has been ably and economically conducted; and I earnestly approve his estimates for the ensuing year for railway post-office clerks, route agents, and mail messengers, as well as to the very clear and strong reasons which he gives for the amounts estimated to be necessary for these items. Too much care and attention cannot be bestowed upon the mail in transit. It interests directly every intelligent citizen; and no obstacles should be allowed to exist that would retard its proper extension, or impair its efficiency in any respect.

The suggestion of last year that the persons employed in the care of mails on railroad routes be classed or designated as railway post-office

clerks, suitably graded, and that the appropriation therefor be made as a whole, instead of dividing it into three parts as at present, is renewed, for the reasons that the present practice has neither the merit of usefulness nor economy.

Particular attention is invited to the recommendation that provision be made for the relief of employes injured in the line of duty on railroad routes. Other governments make provision for those incapacitated in the line of duty in the public service, and some relief should be afforded under such circumstances to employes of the United States postal service.

That part of the report of the General Superintendent of Railway Mail Service concerning the proposed second daily mail on the Saint Louis, Iron Mountain and Southern Railroad is recommended to your especial attention. The new railroad arrangements to Texas, via New Orleans, and the Missouri, Kansas and Texas Railroad, will give that State improved and sufficient postal facilities; and the course of events clearly indicates that two daily trains will have to be placed on the line of road from Saint Louis, via Little Rock, to Texarkana, in order to secure to that road its proportion of the Texas business; but, for the present, the State of Arkansas, and more especially the city of Little Rock, is without proper mail facilities, and provision should be made for a second daily train between Saint Louis and Little Rock.

#### FINES AND DEDUCTIONS.

The amount of fines imposed upon contractors, and deductions made from their pay, for failures and other delinquencies for the fiscal year ended June 30, 1880, was \$415,723.83, and the amount remitted for the same period was \$92,301.26, leaving the net amount of fines and deductions \$323,422.57.

#### REVIEW OF RESULTS OF CHANGES IN THE LAW.

In briefly reviewing the changes in the laws touching the transportation of the mails and the compensation therefor, which have been brought about at my suggestion since I assumed the conduct of the contract office, I mention with the highest satisfaction the law giving subcontractors a lien upon the pay of contractors for carrying the mails. The persons employed as subcontractors or carriers are, as a rule, dependent upon their own labor for the support of themselves and families, and have but meager knowledge of business transactions to which the government is a party. The character of the employment being in the nature of a service rendered for the Post-Office Department, they did the work and in many cases for long periods, under the impression that the government was obligated to and could pay them for such service, and the mistaken confidence growing out of this idea removed suspicion and rendered them an easy prey to designing men. The present law extends the protection of the government to those who actually carry the mails, and thus much injustice and suffering are averted. The provision of law enacted at the last session of Congress limiting the increase in compensation for increased celerity to not exceed 50 per centum of the cost of the service at the time of the change, is a decided improvement over the law which prevailed for about a half century. It is believed that the needed facilities can be obtained under the new law; and it is certain that its effect will be to reduce the cost of carrying the mails.

I have in previous annual reports favored a change in the law regulating the compensation to railroad companies for carrying the mail, so as to make space the principal element of the basis upon which to fix the rates of pay, coupled with the weight of mails as a gauge to the amount of space to be paid for in each case. Space should be the principal factor, because it is the element essential to the proper performance of the service on every route; and the amount to be paid for should be gauged by the weight carried in order to secure uniformity in the rate of compensation, and for the more important reason that the expenditure of \$10,000,000 annually for a service covering 85,000 miles of road, and for which there can be no competition, should be restricted by law, and not left to the discretion of any officer of the government.

I have repeatedly urged the propriety of relieving railroad companies of the delivery of mails beyond stations, and I now renew the recommendation. The custom of requiring the companies to do this work is not supported by law, it operates unfairly as it is not an element in the basis upon which the rates of compensation are determined; and in addition to this it is a hindrance to the usefulness of the postal service, and must, in the end, give way to the rules and customs which govern railroad transportation generally. But the cost of assuming this service would be so considerable that the department could not be justified in doing so without the sanction of Congressional action, and a corresponding increase of the appropriation for mail-messenger service. The transfer of mails in cities between railroad stations and between railroad stations and post-offices was formerly done in open express wagons, upon which large quantities of pouches, &c., were piled. The frequent loss of pouches in New York City led to an investigation, which disclosed the fact that, in the confusion of the street and the darkness of the night, mails were easily stolen from such wagons. In order to afford every security to the mails so carried it was determined to establish in the great cities a service to be performed in wagons constructed upon plans and specifications prescribed by this office. The improved service has been in operation in the largest cities for several years, and the absolute security with which the mails are carried furnishes the most potent reason why the service should be extended to all cities and important towns.

The suggestion made in this report that authority be given to advertise for proposals in newspapers contiguous to routes upon which temporary service is desired and for which reasonable bids cannot otherwise be obtained, if favorably considered by Congress will enable the department to secure such service upon the most favorable terms for the government.

I last year urged that authority be given to establish a fast mail line to Havana; and also to provide improved facilities for postal intercourse with Mexican and South American ports, and I have again called attention to this subject.

The mails, with slight exception, are carried between our own and the ports mentioned, in the ships of other countries, and our postal as well as commercial intercourse with our nearest neighbors, is thus made dependent upon their enterprise. And these interests are in this way strengthening the influences which are leading a large source of wealth from our marts to enrich the merchants of other countries.

I have the honor to be, very respectfully, your obedient servant,

THOS. J. BRADY,

*Second Assistant Postmaster-General.*

Hon. HORACE MAYNARD,

*Postmaster-General.*

*Cost of inland transportation and the items incident thereto for the years 1879 and 1880, with the appropriation for 1881, and the estimate of the amounts necessary to be appropriated for 1882; showing the percentage of increase and decrease, with the cost, appropriation, and estimate for mail locks and keys, mail bags and mail-bag catchers.*

Object.	Cost for 1879.	Cost for 1880.	Per centum increase or decrease of 1880 as to 1879.		Appropriation for 1881.	Per centum increase or decrease of appropriation of 1881 as to cost for 1880.		Estimate for 1882.	Per centum increase or decrease as to appropriation for 1881.	
			Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
routes .....	\$9,567,589	\$9,237,945	.....	3.80	\$9,215,000	0.82	.....	\$10,288,282	10.45	.....
new .....	125,000	150,000	.....	.....	1,388,000	8.82	.....	1,480,000	6.88	.....
at routes .....	754,300	887,221	20.00	.....	350,000	132.23	.....	450,000	28.57	.....
outes .....	6,401,890	7,321,449	17.60	.....	900,000	1.44	.....	1,000,000	11.11	.....
.....	1,272,290	1,278,160	14.86	.....	7,375,000	0.78	.....	8,260,000	12.00	.....
.....	1,072,420	1,139,000	8.32	.....	1,450,000	5.21	.....	1,550,000	6.89	.....
.....	167,649	205,540	6.20	.....	1,225,000	7.65	.....	1,275,000	4.08	.....
.....	112,531	127,260	22.19	.....	300,000	.....	8.18	235,000	17.50	.....
.....	604,174	697,298	13.11	.....	135,000	0.06	.....	150,000	11.11	.....
.....	12,781	14,728	4.98	.....	725,000	3.97	.....	775,750	7.00	.....
.....	170,266	146,002	15.23	.....	100,000	578.93	.....	50,000	.....	50.00
.....	.....	.....	.....	18.89	185,000	26.19	.....	220,000	18.92	.....
Local agents .....	.....	.....	.....	.....	.....	.....	.....	1,000	.....	.....
Mail messengers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mail locks and keys .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mail bags and mail-bag catchers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
For miscellaneous items in the office of the Sec- and Assistant Postmaster-General .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	.....	.....	.....	.....	28,826,000	.....	.....	25,715,082	10.24	.....

\*The cost of railway post-office car service for 1879 was \$1,104,392.

The Auditor's statement.

**THOS. J. BRADY,**  
*Second Assistant Postmaster-General.*

## EXPLANATION OF TABLES.

POST-OFFICE DEPARTMENT,  
OFFICE OF THE SECOND ASSISTANT POSTMASTER-GENERAL,  
*Washington, D. C., November 17, 1880.*

SIR: For a statement of the mail service for the contract year ended June 30, 1880, &c., I have the honor to refer you to the tables hereto annexed.

Table A exhibits the character of the service, the length of the routes, the number of miles of transportation and the cost thereof, at the close of the contract year.

Table B exhibits the railroad service as in operation on the 30th of June, 1880, with the postal-car service; also the pay per mile per annum for each class of service.

Table C exhibits the steamboat service as in operation on the 30th of June, 1880.

Table D shows the weight of the mails, the speed with which they are conveyed, the accommodations for mails and agents, the number of trips per week, the rates of pay per mile per annum, on railroad routes in States in which the contract term expired June 30, 1880, and also in other States and Territories, returns having been obtained with a view to the readjustment of pay, in accordance with the acts of March 3, 1873, July 12, 1876, and June 17, 1878. This table is accompanied with an alphabetical index of titles of companies carrying the mails.

Table E shows the readjustment of the rates of pay per mile on railroad routes, in States in which the contract term expired June 30, 1880, and also in other States and Territories, and on certain new routes, the adjustments being based on returns of the weight of the mails, the speed with which they are conveyed, the accommodations for mails and agents, and the number of trips per week, in accordance with the acts of March 3, 1873, July 12, 1876, and June 17, 1878. This table also is accompanied with an alphabetical index of titles of companies carrying the mails.

Table F shows the rate of pay per annum for the use of railway post-office cars for the fiscal years ended June 30, 1879, and June 30, 1880, and the increase or decrease of 1880 as compared with 1879, with the reasons therefor.

Table G is a statement of the number, description, and prices of mail bags, mail-bag catchers, mail locks and keys purchased, and of the expense incurred on account thereof during the fiscal year ended June 30, 1880.

Table H is a list of railway post-office lines June 30, 1880, showing the increase and decrease therein since June 30, 1879.

Table I is a statement of railway post-office lines, route-agent and mail-route messenger service in operation on the 30th of June, 1880.

Very respectfully, your obedient servant,

THOS. J. BRADY,  
*Second Assistant Postmaster-General.*

Hon. HORACE MAYNARD,  
*Postmaster-General.*



Table of mail-service for the year ended June 30, 1880, as exhibited by the state of the arrangements at the close of the year, authorized by the Postmaster-General.

[The entire service and pay on each route are set down to the State under which the route is numbered, though extending sometimes into other States, instead of being divided among the States in which the different portions lie.]

States and Territories.	Length of routes.			Annual transportation and cost.					Total annual trans- portation by cer- tainty, celerity and security.		Total annual trans- portation by steam- boat.		Total annual trans- portation by rail- road.		Total annual trans- portation.		Total annual cost.
	Miles.	Miles.	Dollars.	By steamboat.	By railroad.	Annual pay for transportation.	Annual pay for railway post- office cars.	Dollars.	Dollars.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Dollars.	
Maine.....	6,402	3,571	89,220	789	1,132	129,714	13,455	142,169	1,790,691	109,564	1,236,634	3,136,880	234,083				
New Hampshire.....	1,919	1,164	85,420	65	690	61,763	4,160	65,913	619,242	13,130	900,980	1,533,352	103,943				
Vermont.....	2,376	1,548	49,251		838	86,454	9,632	95,986	932,202		1,070,457	2,028,059	145,227				
Massachusetts.....	8,149	1,200	66,629	82	1,867	228,986	31,665	260,651	901,157	60,526	3,788,424	4,750,109	336,655				
Rhode Island.....	415	159	11,826	75	181	17,447	3,129	20,576	112,417	47,696	3,995,689	555,804	42,475				
Connecticut.....	1,855	755	31,379		1,070	146,020	30,160	176,189	484,972		2,288,931	2,773,903	207,568				
New York.....	12,690	6,326	248,794	214	6,150	970,806	274,624	1,245,330	3,361,169	126,747	8,535,931	12,023,847	1,504,931				
New Jersey.....	2,299	873	29,611		1,420	167,196	29,700	196,896	459,758		2,513,763	2,973,521	226,507				
Pennsylvania.....	14,410	9,109	247,337	134	5,167	545,505	71,715	617,220	4,010,637	83,304	7,584,169	11,078,110	874,047				
Delaware.....	464	187	5,507		277	19,580		19,580	91,510		258,454	349,964	25,087				
Maryland.....	3,723	1,767	62,562	756	1,200	254,580	45,244	299,833	1,039,149	277,368	1,321,808	2,638,325	376,801				
West Virginia.....	5,862	5,313	61,673	246	3,303	36,922	4,183	40,105	1,288,751	125,892	373,779	1,788,422	117,578				
Virginia.....	12,195	8,895	137,914	1,315	1,985	228,165	45,781	273,936	2,812,818	443,534	2,223,743	5,481,095	438,477				
North Carolina.....	11,569	9,886	116,158	351	1,332	94,321	8,154	102,475	2,049,710	131,872	1,197,247	3,378,820	252,873				
South Carolina.....	4,513	3,231	43,047	50	1,232	92,395	16,451	108,846	575,004	9,947	1,212,251	1,797,202	153,174				
Georgia.....	8,819	6,156	84,463	155	2,508	195,653	81,779	277,432	1,222,704	82,240	2,986,591	3,651,535	315,495				
Florida.....	8,285	3,309	46,593	4,619	457	23,203	1,938	25,231	555,926	733,638	441,954	1,781,518	164,994				
Alabama.....	10,905	8,021	120,072	834	2,050	150,787	20,424	171,161	1,590,402	168,921	2,101,017	3,860,340	309,410				
Mississippi.....	7,212	5,498	94,260	522	1,192	87,109	8,603	95,772	1,173,681	85,280	886,627	2,145,588	194,608				
Louisiana.....	7,353	4,453	104,364	2,311	589	49,024	5,161	54,185	1,114,805	544,544	520,916	2,180,265	329,206				
Texas.....	22,289	19,106	794,807	690	2,493	213,501		213,591	6,254,398	130,603	1,909,806	8,294,807	1,065,820				
Arkansas.....	11,676	8,266	205,597	2,910	500	31,209		31,209	2,427,764	647,868	3,25,944	3,401,576	419,526				
Missouri.....	15,724	10,460	156,407	660	4,598	551,447	50,125	610,572	2,961,339	270,504	5,212,872	8,444,215	814,443				
Tennessee.....	8,419	6,980	92,984	358	1,081	103,488	7,980	111,468	1,584,957	84,699	1,183,142	2,862,798	213,553				
Kentucky.....	9,855	6,881	105,887	1,005	1,969	197,502	23,194	220,696	1,804,785	436,592	1,888,044	4,130,421	375,383				
Ohio.....	13,455	6,415	150,073	216	6,824	923,780	182,626	1,106,406	2,412,292	168,670	9,177,552	11,766,514	1,273,979				
Indiana.....	7,855	4,628	84,835		3,227	304,821	38,579	343,400	1,352,495		3,863,838	5,195,833	428,235				
Illinois.....	12,617	5,364	103,914		7,253	816,715	127,133	943,848	1,880,689		8,572,625	10,463,214	1,047,762				
Michigan.....	9,094	4,400	79,759	928	3,763	313,837	7,152	320,989	1,328,752	894,991	4,962,031	6,575,774	428,097				
Wisconsin.....	8,151	5,121	72,883		3,030	258,505	25,527	284,032	1,499,281		3,067,494	4,566,775	356,915				
Iowa.....	12,051	7,423	100,668		4,618	359,187	21,973	381,160	2,262,260		4,401,002	6,663,262	490,823				
Minnesota.....	7,891	4,436	57,015		3,455	228,004	3,664	231,668	1,004,497		2,713,074	3,717,571	283,683				
Nebraska.....	9,179	7,177	147,065		2,002	406,948	51,760	458,708	2,009,272		1,514,093	3,583,865	605,803				

Table of mail-service for the year ended June 30, 1880, as exhibited by the state of the arrangements at the close of the year, &c.—Continued.

States and Territories.	Length of routes.	Annual transportation and cost.						Total annual trans- portation by celer- ity, certainty and security.	Total annual trans- portation by steam- boat.	Total annual trans- portation by rail- road.	Total annual trans- portation.	Total annual cost.
		Celerity, and certainty, and security.		By steamboat.		By railroad.	Annual pay for transportation.	Annual pay for railway post- office cars.	Total annual pay.			
	Miles.	Miles.	Dollars.	Miles.	Dollars.	Miles.	Dollars.	Dollars.	Dollars.	Miles.	Miles.	Dollars.
Kansas.....	14,565	11,002	185,177	.....	.....	3,563	345,082	15,859	360,941	2,605,003	5,783,113	546,118
Nevada.....	2,904	2,761	227,982	.....	.....	143	9,599	.....	9,599	89,244	1,343,530	237,581
California.....	13,484	8,910	573,959	1,737	44,280	2,817	422,202	41,712	473,914	2,290,924	6,388,044	1,082,153
Oregon.....	4,892	4,353	237,776	215	12,477	324	25,107	.....	25,107	202,481	1,676,677	275,360
Colorado.....	5,890	4,726	361,362	.....	.....	1,164	81,394	.....	81,394	756,044	2,659,283	442,756
Washington Territory.....	3,013	1,440	42,832	1,369	55,415	204	11,531	.....	11,531	117,377	578,435	109,778
Idaho Territory.....	2,263	2,263	156,705	.....	.....	.....	.....	.....	.....	.....	925,708	156,705
Montana Territory.....	3,320	3,320	227,135	.....	.....	.....	.....	.....	.....	.....	1,460,929	237,135
Dakota Territory.....	6,067	5,146	217,731	814	13,000	107	6,498	.....	6,498	66,930	1,573,331	237,229
Wyoming Territory.....	1,753	1,753	152,789	.....	.....	.....	.....	.....	.....	.....	733,217	152,789
Utah Territory.....	3,464	2,937	222,759	.....	.....	527	31,973	.....	31,973	360,953	1,810,080	254,732
Indian Territory.....	3,439	3,439	227,634	.....	.....	.....	.....	.....	.....	.....	1,214,824	227,634
New Mexico Territory.....	2,518	2,499	218,136	.....	.....	19	796	.....	796	11,625	887,081	218,932
Arizona Territory.....	2,575	2,575	352,578	.....	.....	.....	.....	.....	.....	.....	1,109,342	352,578
Total.....	343,888	235,248	7,321,499	23,320	887,221	85,320	9,237,945	1,261,041	10,498,986	96,497,463	178,236,996	18,707,706
Railway post-office clerks.....												1,378,100
Route-agents.....												1,139,000
Mail-route messengers.....												206,540
Local-agents.....												127,280
Mail-messengers.....												697,298
Aggregate.....												22,255,984

NOTE.—The above table shows the contract prices and annual salaries, without reference to fines and deductions. This will explain the apparent discrepancy between this table and the Auditor's statements.

THOS. J. BRADY,  
Second Assistant Postmaster-General.

## REPORT OF THE SUPERINTENDENT OF RAILWAY MAIL SERVICE.

POST-OFFICE DEPARTMENT,  
OFFICE GENERAL SUPERINTENDENT RAILWAY MAIL-SERVICE,  
Washington, D. C., ——— —, 1880.

SIR: The appropriation for

## RAILWAY POST-OFFICE CLERKS

for the fiscal year ending June 30, 1881, is \$1,450,000. From the tables accompanying these estimates the increase and decrease in the force and expenditures for the various years will be seen, as also the large increase in the mails now passing over the various railroads, and the large increase in the porportion of the same handled on postal cars.

## NEED OF CLERKS TO HANDLE REGISTERED MATTER.

In my last annual report I stated that in my opinion there should be placed on all the through great post-office lines clerks whose only duty should be to receive, receipt for, and take sole charge of the registered mail. This class of mail is growing rapidly, and is an important part of the service. The value and importance of this mail demands that on the great lines one clerk should be assigned to its care and safety, for the reason that it is too much to require of a clerk to do full distribution then impose on him a further duty of taking the charge and responsibility of the registered mail, when he must receipt for each package, enter it in his register-book, and obtain in return a receipt for it. This is no small amount of work, to say nothing of the great responsibility.

There has been such an increase in the amount of mail to be distributed on cars that it has been found impracticable to withdraw a sufficient force to be assigned to the registry duty, or to appoint a sufficient number of clerks to perform that service. I am, however, of the same opinion as when I wrote my last annual report, that it should be done, and intend that the recommendations I then made shall be carried out at the earliest possible moment, as I deem the matter of absolute importance, yet hitherto I have not felt at liberty to have the clerks assigned specially to the registry work to the neglect of ordinary mail matter, which would have been the case had they been so assigned.

I desire to call attention to the fact that railway post-office lines from Kansas City, Mo., to Denver, Colo., a distance of 600 miles (double daily between Kansas City, Mo., and Ellis, Kans., and single daily between Ellis and Denver), and double daily service from La Crosse, Wis., to Minneapolis, Minn., are only provided with route agents to perform railway post-office service. So long as the four classes of employés are retained, the appropriation should be made so that it will not be necessary to assign route agents exclusively to railway post-office lines.

There are a number of additional clerks required, while there are a great number of very worthy, competent, and deserving men who should be promoted. I would therefore in view of these facts recommend that you ask for this branch of the service an appropriation of \$1,550,000 for the fiscal year ending June 30, 1882.

## ROUTE AGENTS.

The appropriation for route agents for the fiscal year ending June 30, 1881, is \$1,225,000. Section 4024 of the Revised Statutes provides that

the Postmaster-General may employ route agents at a salary of not less than \$900 nor more than \$1,200 per annum. Heretofore the pay of these agents has been graded according to the average number of miles run daily, but it became an absolute necessity to reduce nearly all of them to the minimum under the law, to prevent there being a deficiency in the appropriation. This reduction was a great injustice to the route agents, many of whom are assigned to duty on railway post-office lines to perform the way or local work, and quite a number actually perform or make the same distribution as railway post-office clerks. It was also great injustice to the agents that run on the larger route-agent lines, where there is a large amount of work to perform. These agents are required to and cheerfully perform their work in such a manner that all way and through connections are made, thus giving the mail practically the same rapidity in transit as a passenger could attain.

There is a growing need and a pressing demand for more double daily route-agent service on the more important lines of that class. Having given this matter mature consideration I have to respectfully recommend that you ask for an appropriation of \$1,275,000 for the fiscal year ending June 30, 1882.

#### MAIL-ROUTE MESSENGERS.

The appropriation for mail-route messengers for the present fiscal year is \$200,000. This amount is not sufficient to meet the demands of the service. Railroads are being built in all parts of the country, and the mileage is increasing more rapidly, and in view of the increasing prosperity of the country will doubtless continue to gain in a much larger ratio in the immediate future.

Where there is a railroad in operation the public very properly demand that it shall have the benefits of an agent upon it, if not more than thirty or forty miles in length. Railroad service without an agent is not as good for the general public on its line as star service. The first agents appointed on a new road are almost invariably mail-route messengers, which increases the demand on this appropriation. It is respectfully recommended that you ask for an appropriation of \$235,000 for the fiscal year ending June 30, 1882.

#### LOCAL MAIL AGENTS.

The appropriation for local mail agents for the present fiscal year is \$135,000. There is great need for an increase in this appropriation. These agents are now required to receipt for and transfer registered mail in addition to their other duties, which greatly increases their work and requires them to assume a heavy responsibility, for which a large percentage of them do not receive an adequate remuneration for the labor performed. There are many railroad junctions which the good of the service demands should be provided with local agents.

There is no branch of the service more important than this, yet its merits have in a measure been overlooked. It neutralizes the good effects of close distribution if the transfers are not made at railroad junctions promptly and with dispatch, and there is no certainty that this will be done unless there is some one to attend to it who is only responsible to the department. If the transfer is intrusted to railroad employes it very frequently happens that the connection is missed, this being to them a secondary consideration, and for the performance of which they think they receive no pecuniary compensation.

I have carefully examined the requirements of this service, and re-

spectfully recommend that you ask for an appropriation of \$150,000 for the fiscal year ending June 30, 1882.

#### **SALARIES OF EMPLOYÉS IN THE RAILWAY MAIL SERVICE.**

In my last annual report I called attention to the present salaries of the employés of this service. If this salary represented the net amount received by these employés it might then be considered fair, but it does not, for out of this must come their expenses when absent from home attending to their duties. In this expense there is no uniformity. His absence and consequently his expense depend on the importance of the route, the length of the run, the schedule, &c. The more important and heavier the route and the work the longer time the employé has to absent himself and the less opportunity he has to take advantage of any little circumstance which would inure to his pecuniary benefit. The more he has the interest of the service at heart the greater the sacrifice he is called upon to make for its benefit.

In fact, the success and growth of this service and the efficiency it has attained have been secured almost entirely by the efforts of those holding subordinate positions, who have, with comparatively small salaries, devoted their time and energies to it, changing from one place to another as their services were demanded, filling in when the exigencies of the service required, regardless of the sacrifices they were called on to make and which could not be compensated for except by such occasional promotion as it has been possible to make. While some have received their hard-earned and merited promotion there are still many who cannot under the present organization have their services thus recognized.

#### **EXTENT OF THE WORK OF THE RAILWAY MAIL SERVICE.**

In the present organization one general superintendent, two assistant superintendents, and nine division superintendents are expected to keep the system in perfect running order on 108,640 miles of railroad and steamboat routes, over which there is performed 102,166,001 miles of annual service, superintend and regulate the workings of 2,946 employés on these routes, regulate and correct the distribution at all post-offices. How this has been done can best be judged from the report of mails distributed and errors made.

In this connection it should be remembered that at least twice in each year there is a general change in the railroad schedules, and many less important ones each month, all of which must be anticipated and the effect of each on the forwarding of the mails provided for.

#### **CHIEF HEAD CLERKS.**

After all these changes in distribution and other information has been tabulated and put in convenient form for reference by the employés on the line, it has been necessary to detail employés to examine the clerks to see that they keep informed of all these changes and that the duty assigned to them is properly performed; in other words, to superintend the work on each particular route or group of routes. To do this it is necessary that such employés travel constantly, and for this the utmost that can be paid them is \$1,400 per annum each, out of which all traveling expenses must come. It does seem that, to provide for this, a grade of officers to be styled chief head clerks should be established, with pay not to exceed \$1,400 per annum and actual traveling expenses, which in no case shall exceed \$3 per day.



PAPERS ACCOMPANYING THE  
CLASSIFICATION OF EMPLOYÉS.

I desire again to recommend that the salaries and designations of employés in this service be reclassified, in accordance with previous recommendations, which are as follows :

Now that the service is brought under one general management, and each employé is required to work under the same general instructions and schemes, the only distinction in fact being the quantity of work, it seems distinctions obsolete in practice should be abandoned. The clerks should be more uniformly graded, avoiding the dissatisfaction that now arises from the distinction in designation and pay where there is none in the work. It would, therefore, be better for the service and prove more economical should the appropriation be made in gross for these five classes, designating them as railway mail service clerks, and allowing, say, five classes, whose salaries shall not exceed the following rates per annum: First class \$800, second class \$900, third class \$1,000, fourth class \$1,200, and fifth class \$1,400. If this recommendation is adopted, the first, second, and third classes would be employed on the lighter and shorter lines. The fourth and fifth classes when railway post-office cars are required. The reclassification and making the appropriation in gross will in no way increase the expenditure.

In the event of the adoption by Congress of this classification the appropriation for railway mail service clerks should be \$3,210,000.

The accompanying Tables A and B are an exhibit of the increase and decrease of this branch of the postal service.

TABLE A.—Statement for the years 1870 to 1880, inclusive, showing the number of railway post-office clerks, route agents, mail-route messengers, and local agents employed; total amount paid each class; and the percentage of increase and decrease in number of employees and annual expenditure.

Year.	Number of railway post-office clerks in service at end of each fiscal year.	Increase in railway post-office clerks.	Increase, per cent.	Total amount paid railway post-office clerks.	Increase in amount paid railway post-office clerks.	Decrease in amount paid railway post-office clerks.	Increase, per cent.	Decrease, per cent.	Number of route-agents in service at end of each fiscal year.	Increase in route-agents.	Decrease in route-agents.	Increase, per cent.	Decrease, per cent.	Total amount paid route-agents.	Increase in amount paid route-agents.	Decrease in amount paid route-agents.	Increase, per cent.	Decrease, per cent.	Number of mail-route messengers in service at end of each fiscal year.
1870..	375	138	36.8	\$442,600 00	\$206,800 00		46.72		587	97		16.52		\$574,600 00	\$96,680 00				78
1871..	513	129	25.15	649,400 00	172,200 00		26.53		684	80		11.60		671,280 00	66,540 00				103
1872..	642	110	17.13	821,600 00	19,400 00		2.36		764	98		12.83		737,820 00	90,420 00				146
1873..	752	98	13.03	941,000 00	117,200 00		12.45		862	74		8.58		828,240 00	68,440 00				171
1874..	850	51	6.00	1,058,200 00	105,400 16		9.96		936	51		5.45		896,680 00					211
1875..	901	141	15.65	1,163,600 16	60,150 03		5.16		987	30		2.95		896,390 52					225
1876..	1,042	9	0.86	1,223,750 19		\$180 70	00.01		1,017	48		4.72		940,151 97	43,761 45				219
1877..	1,051	30	2.85	1,223,569 41	14,723 30		1.20		1,065	78		7.32		959,660 86	19,508 89				248
1878..	1,081	10	0.92	1,238,292 71	103,101 43		8.32		1,143		10	00.87		993,811 51	34,150 65				241
1879..	1,091	115	9.54	1,341,304 14	26,069 21		1.90		1,133			9.50		1,035,861 91	42,050 40				247
1880..	1,206			1,367,403 35					1,252	119				1,116,068 63	80,806 72				838

Year.	Increase in mail-route messengers.	Decrease in mail-route messengers.	Increase, per cent.	Decrease, per cent.	Total amount paid mail-route messengers.	Increase in amount paid mail-route messengers.	Decrease in amount paid mail-route messengers.	Increase, per cent.	Decrease, per cent.	Number of local mail-agents in service at end of each fiscal year.	Increase in local mail-agents.	Decrease in local mail-agents.	Increase, per cent.	Decrease, per cent.	Total amount paid local mail-agents.	Increase in amount paid local mail-agents.	Decrease in amount paid local mail-agents.	Increase, per cent.	Decrease, per cent.	Number of mail-agents in service at end of each fiscal year.
1870..	25		32.05		\$45,710 00	\$10,200 00		35.44		66	16		24.24		\$46,230 00	\$12,430 00				66
1871..	43		41.75		61,910 00	28,000 00		45.23		82	13		15.85		58,430 00	10,786 00				82
1872..	25		17.12		89,910 00	16,830 00		18.72		95	15		15.79		69,216 00	82,896 00				95
1873..	40		23.39		106,740 00	29,800 00		27.92		110	14		12.73		82,896 00	13,680 00				110
1874..	14		6.04		136,540 00		\$0,540 65			124	1		00.80		94,710 00	11,814 00				124
1875..		6		2.67	129,999 35	17,152 92		13.19		125	12		9.6		89,980 70					125
1876..			13.24		147,598 61	446 84		00.83		137		1			101,813 27	11,832 57				137
1877..	29			2.82	147,598 61	6,776 93		4.52		136	7		5.14		105,718 70	3,905 43				136
1878..	6		2.49		154,875 54	16,865 78		10.92		134			10.66		109,041 64	7,136 24				134
1879..	91		26.92		171,241 32	3,593 06		2.05		134	16				116,177 88	3,245 91				134
1880..					174,834 38					150					119,423 79					150

TABLE B.—Statement for the years 1870 to 1880, inclusive, of steamboat and railroad routes, miles of annual service on the same, also miles of railway post-office service and miles of annual service thereon, together with the increase and decrease per cent.

Year.	Miles of steamboat routes.	Increase of miles of steamboat routes.	Decrease of miles of steamboat routes.	Increase, per cent.	Decrease, per cent.	Miles of annual service on steamboat routes.	Increase in miles of annual service on steamboat routes.	Decrease in miles of annual service on steamboat routes.	Increase, per cent.	Decrease, per cent.	Miles of railroad service.	Increase of miles of railroad service.	Decrease of miles of railroad service.	Increase, per cent.	Decrease, per cent.	Miles of annual service on railroad routes.	Increase in miles of annual service on railroad routes.	Decrease in miles of annual service on railroad routes.	Increase, per cent.	Decrease, per cent.
1870...	20,695	...	...	...	...	4,122,385	562,393	...	13.64	...	43,727	6,107	...	13.96	...	47,551,970	3,005,078	...	6.83	...
1871...	20,334	...	261	1.74	...	4,684,778	...	376,342	...	...	49,834	8,077	...	16.21	...	55,557,048	6,934,701	...	12.48	...
1872...	18,860	...	1,474	7.25	...	4,308,436	...	360,651	...	8.03	57,911	8,077	...	9.49	...	62,491,749	8,129,696	...	5.01	...
1873...	16,762	...	2,098	11.12	...	3,947,785	...	...	3.32	8.87	63,457	5,546	...	6.74	...	65,621,445	8,839,100	...	10.42	...
1874...	18,634	...	...	11.17	...	4,078,725	130,940	...	...	2.94	67,734	4,277	...	3.47	...	72,460,545	2,694,365	...	3.72	...
1875...	15,786	...	2,846	15.27	...	3,958,852	...	119,873	...	5.14	70,083	2,349	...	3.23	...	75,154,910	2,586,262	...	3.44	...
1876...	14,883	...	905	5.73	...	3,704,533	...	254,319	...	...	72,948	2,265	...	3.04	...	77,741,172	7,617,538	...	9.80	...
1877...	17,685	...	...	18.83	...	4,038,238	333,705	...	9.01	...	74,546	2,198	...	3.45	...	85,358,710	6,761,685	...	7.92	...
1878...	18,072	...	...	2.18	...	4,629,298	591,060	...	14.63	...	77,119	2,573	...	3.72	...	92,120,895	9,721,597	...	1.06	...
1879...	21,240	...	...	17.53	...	5,091,474	462,176	...	9.98	...	79,991	2,872	...	6.25	...	93,092,992	3,404,471	...	8.53	...
1880...	23,320	...	...	8.92	...	5,608,538	577,064	...	10.18	...	85,320	5,329	...	...	...	96,497,463	...	...	...	...

Year.	Miles of route on which there is railway post-office service.	Increase of miles of route of railway post-office service.	Decrease of miles of route of railway post-office service.	Increase, per cent.	Decrease, per cent.	Miles of annual service by railway post-office.	Increase of miles of annual service by railway post-office.	Decrease of miles of annual service by railway post-office.	Increase, per cent.	Decrease, per cent.	Total miles of railroad and steamboat routes.	Increase of miles of railroad and steamboat routes.	Decrease of miles of railroad and steamboat routes.	Increase, per cent.	Decrease, per cent.	Miles of annual service on railroad and steamboat routes.	Increase of miles of annual service on railroad and steamboat routes.	Decrease of miles of annual service on railroad and steamboat routes.	Increase, per cent.	Decrease, per cent.
1870...	8,952	2,956	...	...	...	6,500,000	3,572,540	...	54.96	...	64,422	5,746	...	8.92	...	51,674,355	8,567,471	...	16.58	...
1871...	11,208	2,908	...	35.82	...	10,072,540	2,224,310	...	22.08	...	70,168	6,603	...	9.41	...	60,241,826	6,558,359	...	10.89	...
1872...	14,117	749	...	5.30	...	12,208,850	450,775	...	3.66	...	70,771	3,448	...	4.49	...	66,800,185	2,679,045	...	4.14	...
1873...	14,806	1,548	...	10.41	...	12,747,625	1,580,010	...	12.23	...	80,219	6,149	...	7.66	...	69,569,230	6,970,040	...	10.02	...
1874...	16,414	518	...	3.16	...	14,307,635	332,150	...	2.32	...	86,368	1,360	...	1.58	...	76,539,270	2,574,492	...	8.36	...
1875...	16,932	781	...	4.61	...	14,639,785	570,130	...	3.89	...	79,113,762	5,000	...	5.73	...	81,445,705	2,331,943	...	2.95	...
1876...	17,713	48	...	...	...	15,209,915	1,715,135	...	11.27	...	87,231	2,960	...	3.21	...	89,396,948	7,951,243	...	9.76	...
1877...	17,761	...	781	...	...	16,925,050	1,008,860	...	5.96	...	92,231	6,040	...	6.34	...	96,749,693	7,352,745	...	8.22	...
1878...	16,980	300	...	2.12	...	17,933,910	...	65,700	...	...	95,191	7,409	...	6.82	...	98,184,466	1,434,773	...	1.48	...
1879...	17,340	2,800	...	13.90	...	17,868,210	3,018,550	...	14.45	...	101,231	...	...	...	...	102,166,001	8,981,535	...	3.90	...
1880...	20,110	...	...	...	...	20,880,710	...	...	...	...	108,640	...	...	...	...	...	...	...	...	...

## INCREASE OF RAILWAY MAIL SERVICE.

The increase in the miles of railroad routes in operation June 30, 1880, over that in operation June 30, 1879, is 6.25 per cent. The increase in miles of annual service performed over the same is 3.53 per cent; the increase on the total miles of railroad and steamboat routes is 6.82 per cent; the increase in miles of annual service performed over same is 3.90 per cent.

The miles of route on which there were railway post-offices is increased 13.90 per cent., and the annual service performed on these routes is increased 14.45 per cent.

## EXTENSION OF POSTAL CAR SERVICE.

There is a double daily line of railway post-office cars between Washington, D. C., and Danville, Va. To make this line of more importance the second daily line should be established between Lynchburg, Va., and Chattanooga, Tenn. The line passes through a rich, populous section that demands and ought to have this increased service. Efforts have been made to secure such additional service, but thus far all our exertions have been unsuccessful; but I have hopes that such service may be secured.

During the past fiscal year sixty-foot cars on the Union Pacific Railroad, between Omaha, Nebr., and Ogden, Utah, were substituted for the fifty-foot cars, which were inadequate; also fifty-foot cars on the Chicago, Milwaukee and Saint Paul Railroad, between Chicago, Ill., and La Crosse, Wis., were substituted in place of forty-foot cars, which were already too small.

Between Richmond, Va., and New Orleans, La., via Charlotte, Atlanta, Montgomery, and Mobile, there has been established double daily service; also between Petersburg, Va., and Savannah, Ga., and Savannah, Ga., and Jacksonville, Fla., single daily service; and also single daily service between Kansas City, Mo., and Pueblo, Colo., and between La Fayette, Ind., and Saint Louis, Mo., the latter making a continuous through line from Toledo, Ohio, to Saint Louis, Mo.

The railroad companies very kindly placed the cars on the above-named lines at the disposal of the department, and the establishment of service thereon should not only be continued, but improved as rapidly as circumstances will permit. The cars run through from Richmond, Va., to New Orleans, La., receiving and delivering mail the entire length of the route, while the companies make their schedule time with regularity and promptness.

There is an urgent demand for further service by railway post-office cars on lines where the benefits of such service ought to be extended, and I therefore respectfully recommend that you ask for the purpose of transportation by postal cars \$1,466,000.

## THE SPECIAL FUND FOR SPECIAL FACILITIES.

The special fund placed at the disposal of the Postmaster-General for the present fiscal year is \$350,000, which has proved of incalculable benefit to the service, and enabled him to continue and extend the benefits of fast mail service.

I would therefore respectfully recommend that there be appropriated \$350,000, and such further additional sum as will enable him to establish, maintain, and continue the fast mail service.

MAIL DISTRIBUTED, ERRORS MADE, ETC.

Particular attention is called to the statement of error-slips, mail distributed, &c., Tables C and D, attached hereto :

TABLE C.—Statement of mail distributed on the various railway post-office lines of the railway mail service during the fiscal year ending June 30, 1880.

Division.	Number of letter packages distributed.	Whole number of letters distributed.	Number of sacks of paper mail distributed.	Whole number of pieces of paper mail distributed.	Whole number of letters and pieces of paper mail distributed.	Number of packages, pouches, and cases of registered mail matter.
First .....	4, 506, 388	180, 255, 520	451, 763	67, 764, 450	248, 019, 970	1, 144, 863
Second .....	5, 279, 685	211, 187, 400	869, 251	130, 387, 650	341, 575, 050	1, 090, 763
Third .....	1, 534, 093	61, 363, 720	251, 982	37, 797, 800	99, 161, 020	816, 469
Fourth .....	1, 422, 954	56, 918, 160	292, 739	43, 910, 850	100, 829, 010	1, 068, 560
Fifth .....	8, 493, 655	339, 746, 200	1, 573, 115	235, 967, 250	575, 713, 450	1, 732, 243
Sixth .....	9, 053, 504	362, 140, 160	1, 252, 563	187, 884, 450	550, 024, 610	2, 402, 326
Seventh .....	4, 696, 530	187, 861, 200	748, 743	112, 311, 450	300, 172, 650	1, 471, 920
Eighth .....	1, 214, 869	48, 594, 760	176, 306	26, 445, 900	75, 040, 600	406, 123
Ninth .....	5, 780, 485	231, 219, 400	911, 516	136, 727, 400	367, 946, 800	960, 996
Total .....	41, 982, 163	1, 679, 286, 520	6, 527, 978	979, 196, 700	2, 658, 483, 220	11, 703, 282

NOTE—The calculations in the above table are made upon the basis of 40 letters to each package, and 150 papers to each sack; whereas, in the report for the preceding fiscal year, the basis was 50 letters to each package, and 200 pieces of paper mail to each sack, in consequence of which this report does not show as great an increase as there really was.

TABLE D.—Statement of errors made by railway post-office clerks and route agents in the several divisions of the railway mail service during the fiscal year ending June 30, 1880.

Division.	Number of incorrect slips returned.	Number of errors on incorrect slips.	Missent.				Misdirected.			Number of errors checked against other employes.
			Number of packages.	Number of pouches.	Number of sacks.	Number of registered packages.	Number of packages.	Number of pouches.	Number of sacks.	
First .....	26, 198	47, 768	1, 443	371	119	53	58	43	29	64, 776
Second .....	35, 081	60, 977	603	202	63	15	101	29	13	116, 616
Third .....	26, 587	42, 068	434	12	2	.....	215	7	4	52, 967
Fourth .....	23, 533	40, 399	657	229	68	58	163	28	43	112, 165
Fifth .....	119, 645	220, 571	1, 461	138	102	47	271	45	108	375, 031
Sixth .....	98, 081	167, 182	1, 475	213	103	23	338	63	123	338, 534
Seventh .....	76, 600	133, 401	1, 635	264	244	123	90	13	12	287, 600
Eighth .....	3, 431	4, 715	105	.....	.....	.....	26	.....	3	20, 218
Ninth .....	12, 302	20, 820	1, 276	80	19	7	49	121	12	11, 071
Total .....	421, 458	737, 911	9, 089	1, 615	720	326	1, 251	349	356	1, 378, 778

RECAPITULATION.

Number of letters and pieces of paper mail distributed during the year .....	2, 658, 483, 220
Number of errors made in the distribution of same .....	763, 511
Number of letters and pieces of paper mail distributed to each error .....	3, 482

It will be seen by the above that there has been an increase of 9,821,670 pieces of mail handled over that of last year, and this, notwithstanding the fact that the basis of calculation in preparing the report of 1879 was



25 per cent. greater on letters, and  $33\frac{1}{2}$  per cent. on paper mail, than was taken in the preparation of the present report, without there being a corresponding difference in the actual size or contents of the respective packages and sacks. (See note on Table C.)

It is also shown that while there were 2,658,483,220 separate pieces of mail distributed by railway post-office clerks and route agents, there were but 763,511 pieces missent, or one in each 3,482 pieces distributed.

Attention is also invited to the large amount of registered matter handled as shown by the above tables, being an increase over the amount handled last year of 1,307,292 packages, or more than  $12\frac{1}{2}$  per cent.

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## REPORT OF THE THIRD ASSISTANT POSTMASTER-GENERAL.

POST-OFFICE DEPARTMENT,  
OFFICE OF THE THIRD ASSISTANT POSTMASTER-GENERAL,  
*Washington, D. C., November 10, 1880.*

SIR: I have the honor to submit the following report, showing the operations of this office for the fiscal year ending June 30, 1880, and to call attention particularly to the accompanying tables, numbered from 1 to 20, inclusive, viz:

No. 1. Estimates of the appropriations required by the Post-Office Department for the service of the fiscal year ending June 30, 1882.

No. 2. Statement showing appropriations for the fiscal year ending June 30, 1880, and the expenditures made, by items, out of such appropriations, up to September 30, 1880.

No. 3. Statement exhibiting the receipts and expenditures, under appropriate heads, by quarters, for the fiscal year ending June 30, 1880, compared with the fiscal years ending June 30, 1879, and June 30, 1878.

No. 4. Statement showing receipts and disbursements at Treasury depositories during the fiscal year ending June 30, 1880.

No. 5. Statement showing receipts and disbursements at depository post-offices on account of the fiscal year ending June 30, 1880.

Nos. 6 and 7. Statement showing the number and value of postage-stamps, stamped envelopes, newspaper wrappers, and postal cards issued during the fiscal year ending June 30, 1880.

No. 8. Statement showing the number and value of official postage-stamps and stamped envelopes issued to each of the executive departments during the fiscal year ending June 30, 1880.

No. 9. Statement showing the issue of postage-stamps, &c., by denominations, during the fiscal year ending June 30, 1880.

No. 10. Statement showing the increase in the issues of postage-stamps, stamped envelopes, newspaper wrappers, and postal cards, for the fiscal year ending June 30, 1880, over those of the preceding year.

No. 11. Statement showing the amount of dead mail matter treated in the division of dead letters during the fiscal year ending June 30, 1880.

No. 12. Statement showing the disposition of mail matter opened in the division of dead letters during the fiscal year ending June 30, 1880.

No. 13. Statement showing the amount, classification, and disposition of unmailable matter received at the dead-letter office during the year ending June 30, 1880.

No. 14. Statement showing the number of foreign dead letters received and disposed of during the fiscal year ending June 30, 1880.

No. 15. Statement showing the number, classification, and disposition of dead registered letters during the fiscal year ending June 30, 1880.

No. 16. Statement showing the number of registered letters and parcels transmitted through the mails from each State and Territory in the United States during the fiscal year ending June 30, 1880.

No. 17. Statement showing the number of packages dispatched in registered through pouches from the post-office at New York to other through-pouch offices, by months, during the fiscal year ending June 30, 1880.

No. 18. Statement showing the number and value of registered packages forwarded during the fiscal year ending June 30, 1880, for the Post-Office and Treasury Departments.

No. 19. Statement showing the operations of the registered-letter system in the cities of New York, Philadelphia, Chicago, and Washington, during the fiscal year ending June 30, 1880.

No. 20. Statement showing the increase in the amount collected as fees on registered matter at twenty-five leading post-offices during the fiscal year ending June 30, 1880, over the amount collected during the preceding year.

#### STATEMENT OF FINANCES.

The appropriations for the service of this office during the fiscal year amounted to \$884,400, and the expenditures to \$800,321.01, leaving an unexpended balance of \$84,078.99, or 10.5+ per cent. of the appropriations.

The estimated amount of appropriations required to conduct the service of this office for the coming fiscal year is \$1,082,400, an increase of \$146,980 over the amount appropriated for the current year. A detailed explanation of the estimates will be found among the papers accompanying the table (No. 1) of estimates attached to this report.

#### DEPARTMENT RECEIPTS AND EXPENDITURES.

The receipts and expenditures of the department during the fiscal year ended June 30, 1880, as shown by the books of the division of finance, were as follows:

Receipts:	
Letter-postage paid in money.....	\$78,752 92
Box-rents and branch offices.....	1,423,301 73
Fines and penalties.....	11,287 53
Postage-stamps, stamped envelopes, newspaper wrappers, and postal cards.....	31,494,120 15
Dead letters.....	6,506 97
Revenue from money-order business.....	269,205 25
Miscellaneous.....	32,304 79
Total.....	33,315,479 34
Expenditures:	
The total expenditures for the service of the year were.....	36,101,820 38
An excess over the receipts appertaining to and for the last fiscal year, supplied out of appropriations from the Treasury, of.....	2,786,341 04

The expenditures given above do not include the sum of \$440,983.30 paid on liabilities incurred during previous fiscal years.

The total receipts for the year were \$3,273,496.48 (or 10.8+ per cent.) more than those of the preceding year, and \$2,651,455.44 (or 8.6+ per cent.) more than the estimates therefor. The increase of receipts over

the amount estimated is largely attributable to the continued business prosperity of the country, and the consequent increased demand for postage-stamps, postal cards, &c., the sales of which amounted to \$3,349,045.16 more than for last year, and \$4,118.527.03 more than for 1878.

Excluding official postage-stamps and money-order receipts from both fiscal years, there is an increase of ordinary receipts over those of the past fiscal year of \$3,500,090.94, or 11.8+ per cent.

Table No. 3, which accompanies this report, shows the receipts and expenditures by fiscal quarters, and the increase or decrease as compared with previous years.

An exhibit of the condition of accounts of the last fiscal year on the 30th of September, 1880, will be found in table No. 2 herewith.

In addition to the receipts stated above, there was drawn from the Treasury, on account of special and deficiency appropriations, the sum of \$3,597,717.20, as follows :

To supply deficiencies in the revenues for the year ended June 30, 1880, act of March 3, 1879.....	\$3, 500, 000 00
For deficiency in the postal revenues for 1877 and for prior years, act of June 16, 1880.....	97, 717 20
Total .....	3, 597, 717 20

In this connection it is proper to state that the amounts appropriated by act of April 7, 1880, "to provide for a deficiency in the appropriation for the transportation of the mails on star routes," viz: \$1,100,000 "to meet the expenses of inland mail transportation on star routes for the remainder of the current fiscal year," and \$100,000 "to enable the Postmaster-General to place new service as authorized by law"—to be paid out of any money in the Treasury not otherwise appropriated—were, in consequence of the great increase in the postal revenues, not drawn from the Treasury, and, therefore, are not included in the foregoing statement.

ESTIMATES.

The estimated expenditures for the fiscal year ending June 30, 1882, are .....	\$42, 475, 932 00
The estimated revenue for the same year is.....	38, 845, 174 10
Leaving a deficiency to be appropriated out of the general Treasury of.	3, 630, 757 90

Table No. 1, accompanying this report, furnishes the estimates in detail.

In estimating the revenue for 1881-'82 the item for official postage-stamps is not stated separately, for the reason that official (or penalty) envelopes are, in a large measure, taking the place of official stamps, and the estimated revenue from this source is comparatively trivial.

CONDITION OF DEFICIENCY APPROPRIATIONS.

The following statement shows the condition of the appropriations from the general Treasury to supply deficiencies in the postal revenues, viz:

1. For the fiscal year ended June 30, 1879, the amount appropriated from the Treasury to supply deficiencies in the revenues was \$4,222,274.72, of which \$1,222,274.72 remains undrawn and available for unadjusted liabilities contracted prior to July 1, 1879.
2. For the fiscal year ended June 30, 1880, the amount appropriated

from the Treasury to supply deficiencies in the revenues was \$5,457,376.10, of which \$1,957,376.10 remains undrawn and available for unadjusted liabilities for said fiscal year.

The balances above mentioned are estimated to be sufficient for the payment of the unadjusted liabilities for said years.

#### RECEIPTS AND DISBURSEMENTS AT DEPOSITORIES.

The receipts and disbursements at Treasury and post-office depositories during the last fiscal year may be briefly summarized thus :

##### At Treasury depositories :

Balance subject to draft June 30, 1879.....	\$2, 620, 334 23
Outstanding warrants June 30, 1879.....	52, 484 13
Aggregate receipts during the year ended June 30, 1880.....	9, 641, 583 04
<b>Total .....</b>	<b>12, 314, 401 40</b>
Amount of warrants paid during the year.....	9, 813, 888 03
<b>Balance at depositories June 30, 1880 .....</b>	<b>2, 500, 513 37</b>
Outstanding warrants June 30, 1880.....	164, 864 39
<b>Balance subject to draft June 30, 1880.....</b>	<b>2, 335, 648 98</b>

Transactions at these depositories, in detail, with amount of increase or decrease as compared with previous years, are shown in table No. 4 accompanying this report.

##### At post-office depositories :

Balance subject to draft June 30, 1879.....	\$700, 695 06
Aggregate receipts during the year ended June 30, 1880.....	5, 026, 815 38
<b>Total .....</b>	<b>5, 727, 510 44</b>
Disbursements during the year.....	5, 002, 156 80
<b>Amount subject to draft June 30, 1880.....</b>	<b>725, 353 64</b>

Table No. 5, submitted with this report, exhibits the receipts and disbursements at the different post-office depositories in detail.

#### CONTRACTS ENTERED AND ACCOUNTS KEPT.

During the year there were 7,470 contracts for mail service (including 2,490 subcontracts) received from the Second Assistant Postmaster-General, and 14,354 orders of the Postmaster-General (of which 4,783 were double) recognizing mail service not under contract, curtailing or extending service, or modifying previous orders, being an increase of 3,575 contracts and of 1,654 orders, as compared with the previous year. These contracts were examined, verified, and entered upon the books of the division of finance for reference when passing upon reports from the Auditor for the payment of mail-contractors and other creditors of the department. The number of such reports received and adjusted during the year was 39,706, an increase of 5,756 over the previous year.

Accounts were kept with the Treasury, 9 sub-treasuries, and 41 designated depositories, involving the sum of \$9,641,583.04, against which 13,940 warrants were issued.

Accounts were also kept with 100 post-office depositories, involving the sum of \$5,727,510.44, of which \$3,444,574.16 arose from the proceeds of the depository offices themselves, \$1,471,315.42 from deposits by other offices, and \$110,925.80 from collection drafts. Against the accumula-

tions in the depository offices 25,866 drafts were issued, amounting to \$3,645,546.84. In addition to the amount paid out by draft, the sum of \$1,356,609.96 was paid to route agents, railway post-office clerks, mail messengers, and letter-carriers by the postmasters authorized to make such payments, the accounts for which were rendered monthly to this office.

The large and continued increase in the number of depositing offices, which reached nearly 13,500 at the end of the year, and the limited number of clerks available for keeping deposit accounts, rendered it impossible to record the number of certificates of deposit received and entered. It is estimated that more than 60,000 certificates were thus treated. More than 80,000 circulars of instruction, in addition to several thousand letters and statements of account, were forwarded to postmasters.

Since the close of the fiscal year, under the operation of order No. 33, dated August 3, 1880, whereby all post-offices, except the 86 designated as "depository and draft" (over 43,000 in number), were made "depositing," the labors of the division of finance have been so largely increased that the present force is wholly inadequate to properly perform them.

#### POSTAGE-STAMPS, STAMPED ENVELOPES, AND POSTAL CARDS.

The number of ordinary postage-stamps issued to postmasters for sale to the public during the year was 875,681,970, valued at \$22,414,928; of special stamps for the collection of insufficiently prepaid postage, 6,284,500, valued at \$251,836; of newspaper and periodical stamps, 1,770,082, valued at \$1,252,903.30; of ordinary stamped envelopes, 98,616,000, valued at \$2,496,238.93; of stamped envelopes bearing a printed request to return, 76,835,500, valued at \$2,381,35.15; of newspaper wrappers, 31,685,500, valued at \$381,787.60; of postal cards (including the 2-cent international card), 272,550,500, valued at \$2,753,470; of official postage-stamps issued to the executive departments for official use, 3,351,995, valued at \$140,199.08; and of official stamped envelopes and wrappers issued to the War Department for official use, 621,000, valued at \$14,624.40; making a total number of 1,367,397,047, and a total value of \$32,087,342.46.

These issues show an increase in value over those of the preceding year as follows: Of ordinary postage-stamps, \$2,297,669, or 11.4 per cent.; of newspaper and periodical stamps, \$164,491.14, or 15.1 per cent.; of ordinary stamped envelopes, \$335,821.01, or 15.5 per cent.; of special-request stamped envelopes, \$241,651.05, or 11.2 per cent.; of newspaper wrappers, \$26,568.70, or 7.4 per cent.; and of postal cards, \$535,500, or 24.1 per cent. There was a decrease in the issue of stamps for the payment of postage due, amounting to \$114,121; of official postage-stamps, amounting to \$484,800.87; and of official stamped envelopes, amounting to \$454,387.50.

The total increase in the value of all the issues was \$2,548,391.53, or 8.6 per cent.

There were issued, in addition to the foregoing articles, for official use, 6,729,500 registered-package envelopes, 24,255,200 post-office envelopes, and 1,420,000 envelopes for returning dead letters, making a total of 32,404,700. There were also issued 2,307 books used in the collection of postage on second-class or newspaper matter.

The total number of requisitions filled during the year was as follows: For ordinary postage-stamps, 122,583; for postage-due stamps, 4,111; for newspaper and periodical stamps, 9,044; for ordinary stamped



envelopes and wrappers, 59,598; for special-request stamped envelopes, 65,075; for postal cards, 66,393; for official postage-stamps and stamped envelopes, 26; for registered-package envelopes, 46,644; for post-office envelopes, 27,391; for newspaper and periodical receipt-books, 2,307; making a total of 403,172.

In filling these requisitions the following number of packages was made up and forwarded: Of ordinary postage-stamps, 124,458; of postage-due stamps, 4,105; of newspaper and periodical stamps, 9,035; of ordinary stamped envelopes, 83,795; of special-request stamped envelopes, 60,267; of postal cards, 72,268; of official postage-stamps and stamped envelopes, 60; of registered-package envelopes, 48,291; of post-office envelopes, 39,779; of newspaper and periodical receipt-books, 2,307; making a total of 444,365.

Of this large number of packages thus forwarded through the mails but four were lost, their value being only \$63. Small as this amount is, it is gratifying to state that it was lost through no want of vigilance or efficiency in the employés of the postal service.

In transacting the immense amount of business in part represented by the foregoing figures, much incidental work was performed, which cannot well be tabulated, such as the keeping of ledger accounts with postmasters; the correspondence involved in the same; the preparation and keeping of the permanent records of the department; the auditing of the claims of postmasters for losses by fire or otherwise; the examination of the books of post-offices, showing collections of newspaper and periodical postage; and many other matters.

#### POSTAGE COLLECTED ON SECOND-CLASS MATTER.

The weight of newspaper and periodical matter mailed during the year from regular offices of publication or from news agencies was 61,322,629 pounds (30,661 tons), the postage on which was \$1,226,452.58. This is an increase of \$122,267.91, or 11 per cent., over the amount of postage collected on such matter during the preceding year, and is rather remarkable considering the reduction made by the act of March 3, 1879, in the rate of postage on periodicals, which reduction went into effect only two months prior to the beginning of the present fiscal year.

The number of post-offices at which this class of matter was mailed during the year is 4,423—an increase of 235, or 5.6 per cent., over the number for the preceding year.

The following table shows the number of pounds of newspapers and periodicals mailed during the year, and the amount of postage collected thereon, at ten of the principal post-offices in the United States:

Post-office at—	Weight of matter.		Postage collected.	Per cent. of total amount collected in the United States.
	In pounds.	In tons.		
New York, N. Y .....	17, 326, 455	8, 063	\$346, 529 10	28.3
Chicago, Ill.....	5, 775, 760	2, 888	115, 515 20	9.4
Boston, Mass.....	3, 753, 016	1, 876	75, 060 32	6.1
Philadelphia, Pa.....	3, 169, 614	1, 585	63, 392 28	5.1
Saint Louis, Mo.....	2, 097, 319	1, 348	53, 946 38	4.4
Cincinnati, Ohio.....	2, 593, 790	1, 297	51, 873 98	4.2
Augusta, Mo.....	2, 216, 901	1, 108	44, 338 02	3.7
San Francisco, Cal.....	1, 180, 764	590	23, 615 28	2.0
Louisville, Ky.....	763, 840	382	15, 276 80	1.2
Baltimore, Md.....	592, 546	296	11, 850 92	1.0
Total .....	40, 070, 014	20, 033	801, 400 28	65.6

## TWO-CENT INTERNATIONAL POSTAL CARD.

On the 1st of December, 1879, the department began the issue of the two-cent international postal card authorized by act of Congress approved March 3, 1879. The total number issued up to the close of the fiscal year was 2,796,500. These cards are intended for circulation between this country and the other countries of the Universal Postal Union. They are made of paper of the same color and quality as that used for the domestic postal card, and are printed with light-blue ink. They bear the words "Universal Postal Union" and "United States of America," in English and French, as required by the terms of the Postal Convention, and have a neat border. The stamp consists of a head of Liberty, similar to that on the United States twenty-dollar gold piece, surrounded by an oval belt containing the figure "2" on either side, and the words "U. S. Postal Card—two cents."

## POSTAGE-DUE STAMPS.

During the past year all postage found to be due on matter arriving at destination through the mails has been collected, under a provision in the act of Congress approved March 3, 1879, by means of special stamps known as "postage-due" stamps—the stamps being applied to the matter on which the postage is due, and paid for by the party to whom the matter is addressed. Formerly this class of postage was paid in money without the use of stamps, so that in securing full returns of it the department was entirely dependent upon the fidelity of postmasters. No exact statistics have been yet obtained to show the increase in receipts arising from this change; but there is no doubt that it has been a beneficial one, aside from its mere pecuniary advantages.

## COMPENSATION OF POSTMASTERS.

In the last annual report allusion was made to the beneficial results of the change recommended by this office and adopted by Congress in the method of compensating postmasters at fourth-class offices—a change that went into effect on the 1st of July, 1878. The experience of another year still more forcibly illustrates the wisdom of this change. If the old system of compensation by commissions on sales had been continued in force, the amount required for compensation during the past year would probably have exceeded the amount really paid by more than a million dollars.

## DEAD LETTERS AND THEIR TREATMENT.

There has been an increase in the number of pieces of dead mail-matter received at the Dead Letter Office during the year, mainly in misdirected letters and undelivered parcels of fourth-class matter. Of the former there were 201,899 received as against 58,754 during the previous year. This great increase was caused by the order of the department, dated September 20, 1879, declaring unmailable all matter addressed to places under other than officially-recognized post-office names. It is believed, however, notwithstanding such a marked increase in the number of letters sent to the Dead Letter Office from this cause, many of which might, under the old system, have reached their destination after one or two efforts to ascertain it, that the ultimate effect of the order referred to will be beneficial in leading the public to greater care

in addressing matter to be forwarded through the mails, and thus to promote its certain and speedy delivery.

The increase in the number of packages of fourth-class matter received, while not due to the same cause as that producing the increase in the letters, is not owing to any lack of efficiency in postal employes; it rather shows that greater numbers of such packages are being sent through the mails, and bears testimony not only to the general business prosperity of the country, but to the growing popularity of the postal service as a means for transporting small parcels of merchandise or other articles. If the patrons of the post-office would avail themselves of a privilege given them by the law and the postal regulations, the amount of this kind of matter sent to the Dead Letter Office would be greatly reduced. Under this privilege there should appear on every parcel of third or fourth class matter deposited in the mails a printed or written request that the sender be notified by the postmaster in the event of its non-delivery after a given time, and of the amount of postage necessary in such case for its return. The sender would thus be given an opportunity to reclaim the parcel from the mailing office in case of misdirection or insufficient postage, or to secure its prompt return to him if unclaimed at the office of destination.

There has been no change during the year in the mode of treating letters and parcels received at the Dead Letter Office. Of the letters opened 23,400 were found to contain money to the amount of \$43,336.13; 21,311 contained drafts, checks, notes, bills of exchange, &c., of the face value of \$1,520,216.65; 34,771 contained receipts, paid notes, and canceled obligations of all sorts; 30,957 contained photographs; and 68,749 contained postage-stamps.

The number of packages of merchandise, books, and trinkets of all sorts recorded, and either returned to the senders or stored away for identification by the owners, was 56,308.

The whole number of foreign letters returned to country of origin during the year was 210,169; the number originating in the United States and returned by foreign countries was 110,223.

Tables Nos. 11 to 15, inclusive, herewith, contain full information concerning the number, contents, and manner of treating dead mail-matter.

#### THE REGISTRY SYSTEM.

The total number of letters and parcels registered throughout the country during the year was 6,996,513, of which 5,251,118 were domestic letters, 448,656 domestic parcels of third and fourth class matter, 249,722 letters to foreign countries, 8,247 parcels of third and fourth class matter to foreign countries, and 1,038,770 letters and parcels of official matter forwarded for the government, and by law exempt from the payment of registry fees. The amount of fees collected during the year was \$595,774.30, which is an increase of \$136,038.60, or 29.57 per cent., over the amount for the previous year. The increase in the number of letters and parcels registered was 1,567,491. The actual losses of registered matter during the year amounted to 1,118 letters and parcels, which is at the rate of one in about every six thousand two hundred. This is proportionately a smaller loss than for the previous year, and it speaks well for the manner in which the registry system is conducted; for while the number and value of letters and parcels registered is constantly increasing, the percentage of losses is all the time diminishing. This is owing very greatly, of course, to the greater efficiency of postal officials throughout the service, but no small credit is due to the great improvements made in the system, some of which were de-

tailed in the last two reports of this office. On this point the postmaster of New York—a most competent authority—writes as follows:

There is a marked improvement in the manner of conducting registry business at the smaller offices, as shown by their dealings with this office, owing without doubt to the simplification of the system, the full and explicit rules, regulations, and instructions, as they appear in the new regulations, and the fact that every postmaster has been furnished with them. \* \* The diminution in complaints of losses shows that the making up matter direct to destination has added to its safety in a marked degree.

#### THROUGH REGISTERED POUCH SYSTEM.

The regular through registered pouch system has been extended to twenty-eight additional post-offices during the past year, making in all eighty-four post-offices which on the 1st of July last were exchanging such pouches. The growth of the registry business has been so rapid and so enormous that without the aid of this system it would be impossible with the present force in many post-offices to take care of the great amount of registered matter in transit from one section of the country to another.

The advantages of this through-pouch system—which exists only on railroad lines—have been detailed in former reports of this office. A mention now of only a few of these advantages will serve to give an idea of the importance of the system:

1st. It facilitates the dispatch and adds to the security of registered matter between given points, by dispensing with any examination from intermediate postmasters or other officials.

2d. By reason, also, of the uninterrupted transit of the through pouches, all postmasters along the line are saved the labor of handling, and the responsibility for the security of the registered matter in them.

3d. It relieves the railway mail service of repeated handlings of separate parcels of registered matter, and thus prevents their accumulation.

4th. By lessening the opportunity of tampering with valuable registered packages, it gives greater protection to them, and in case of loss it greatly circumscribes the field of investigation.

#### USE OF BRASS-LOCK POUCHES FOR REGISTERED MATTER.

As an auxiliary to the through-pouch system, a great improvement in the manner of transmitting registered matter on important star-routes has been adopted during the year, and is now in process of establishment in various parts of the country. This improvement, which has been secured without trouble or expense to the department, consists simply of the employment for registered matter of the brass-lock pouches heretofore used for ordinary through matter between terminal points on certain star routes, and the transmission of such pouches, under special regulations, in somewhat the same manner as the regular through registered pouches are dispatched on lines of railroad.

Whenever the combined amount of registered and ordinary through mail-matter between any two offices on star routes is sufficient to justify it, this auxiliary through-pouch system will be put into operation. Additional security will thus in all such cases be provided for both the registered and ordinary mails. It is confidently expected that when the system is more fully in operation it will prevent many of the delays occasioned by rehandling, billing, and recording large quantities of registered matter at intermediate post-offices on important star routes; will greatly reduce the number of losses and cases of depredations, which have been most frequent on those routes; and will entirely relieve way post-offices on lines over which the system is established of the labor and respon-



sibility heretofore connected with the handling of through registered matter in transit.

#### MANIFOLD PROCESS OF PREPARING REGISTRY RECEIPTS.

Another improvement adopted during the last year and introduced into several of the larger post-offices is the manifold process of preparing receipts for registered matter, obtaining at one writing duplicate or triplicate copies in books of record specially prepared with carbonic paper. It has proved to be a great saving and convenience to all post-offices where it has been introduced, and it confers a still greater benefit upon the public, who are relieved of much of the ordinary delay connected with the registration of private matter. The postmaster of New York speaks of this system in the following terms:

The devising and adopting manifold books for registering at the receiving-windows, and in making up station-mails, also in entering the mails by manifold, has proven a great benefit, \* \* \* besides permanently improving the system at this office in saving labor and expediting the dealing with the public at the receiving-windows.

The further extension of the system, and the application of some of its features to other branches of registry business, is contemplated.

#### ACCOUNTABILITY OF MAIL-CONTRACTORS FOR LOSSES.

It is believed that additional security would be given to registered matter over star routes if the contractors for carrying the mails on them were made accountable for losses directly traceable to the carelessness or other fault of their agents. Most of the losses of registered matter occur on star routes, and many of them are doubtless caused by the delinquency of mail-carriers. Of course, in every such case, the department and the public are without pecuniary redress. There is no good reason why the general rule of law, that the principal is responsible for the acts of his agent, should not apply to cases of this kind. If it did, there can be little doubt that the losses would soon cease. Nor would this be the only benefit secured, for as contractors would be compelled, for their own protection, to engage only reliable persons to perform their work, the general service of carrying the mails on star routes would probably be improved. It is respectfully suggested that in all contracts hereafter to be entered into for carrying the mails a clause be inserted providing for the accountability for losses of registered matter in the manner here referred to.

#### REGISTRATION OF THIRD AND FOURTH CLASS MATTER.

It is very gratifying to state that the registration of third and fourth class matter, inaugurated on the 1st of October, 1878, and to which allusion was made in my last annual report, is still attended with extraordinary success. Some idea of the business may be formed by an account of its operations in the New York post-office, as reported by the postmaster:

The registration of third and fourth class matter is increasing at a most prodigious rate. During the past winter it was only by the most extraordinary exertions that I was enabled to deal with it and dispatch it with the same precision as first-class registered matter.

The first quarter of registration of third and fourth class matter in 1879, 18,230 packages were registered in this city, while in the last quarter of the past fiscal year 47,018 parcels were registered. In the first quarter of the last fiscal year 24,570 parcels were registered; 46,250 the second quarter; 35,685 the third quarter; and 47,018 the last quarter; making 153,523 parcels during the year.

Since the registration of this matter commenced 223,167 parcels have been registered, amounting in fees to \$22,316.70. \* \* \* The fees for the last fiscal year on this matter alone amounted to \$15,352.30.



The entire number of parcels of third and fourth class matter registered throughout the country during the year was 456,903, the fees on which amounted to \$45,690.30.

#### FILES, RECORDS, AND MAILS.

The total number of letters and other inclosures received, opened, and examined in this office during the year was 1,105,256. Among these were 454 that contained money, and 4,979 that contained stamps, stamped envelopes, and postal cards returned by postmasters for redemption. Of the letters received, 25,508 were briefed and recorded, and filed after final action had been taken on them; and 9,129 letters were written in the office, and copied, enveloped, and mailed.

#### INCREASE OF CLERICAL FORCE NEEDED.

In the several divisions of this office the work has greatly increased during the past year, so much so, indeed, that an increase of the clerical force is absolutely necessary. It will be apparent to even a casual student of postal history that in the past a growth of the service in general has always been followed by an increase of work and responsibility in the department proper. This must be the inevitable result in future. The same principle governs, of course, as in private transactions: if the general business increases, as a natural corollary the force should be sufficient to perform it. When, therefore, it is remembered that during the past year the issues of postage-stamps and other supplies for the public have increased more than 12 per cent.; that the general receipts of the department are nearly 11 per cent. greater than for the preceding year; and that the registry system has grown during the year at the enormous rate of 30 per cent., it must be evident that the present force of this office, which has especial jurisdiction over these several branches of business, cannot continue to properly perform it.

Outside, however, of this general cause, the duties of the finance division of this office have been greatly enlarged by a change some time since made in the manner of collecting the revenues of post-offices, allusion to which has been hereinbefore made. This change was made by request of the Auditor of the Treasury for this department, on the ground of its absolute necessity to the intelligent performance of his own duties, and is believed to have been altogether expedient and proper. By it the finance division will be compelled to keep accounts with many additional depository and draft offices, and to keep records for the deposits of over 27,000 additional postmasters. So far much of the work resulting from this change has been necessarily neglected, so that at present, by reason alone of insufficient force, the office is unable to throw around the collection of the postal revenues the safeguards known from past experience to be necessary.

It is believed that altogether an increase of thirteen clerks will be needed for this office, the proper items for which have been included in the regular estimates of appropriations. This number is less than 8 per cent. of the present force. I beg to call attention also to the fact that in the estimates are included items for increasing the compensation of the chief clerk to \$2,500 per annum, for increasing the pay of the clerk in charge of the finance division to \$2,250 per annum, and for restoring the pay of the chiefs of the divisions of postage-stamps and of dead letters to \$2,500 per annum, the amount provided by the acts creating these offices. These additions to the pay of the officers referred to are reasonable and proper, and I cannot too urgently recommend that they be pressed upon the attention of Congress.

## RETROSPECT OF THE POSTAL SERVICE.

Some of my leisure moments during the past summer were devoted to an examination into the conduct of the postal service for the last twenty years, and a brief statement of the results of this examination may not inappropriately, and perhaps not unprofitably, be given here.

To ascertain the past conditions of the service, to trace the successive steps taken for its improvement, to discover whether it has kept pace with the progressive tendencies of the age, to see whether in its mutations it has been adapted to the varying wants of the public, to inquire whether it has been true to the great objects for which it was created, to seek guidance for the future in the light of the past—these are profitable subjects of investigation by those to whom the postal interests are confided, whether in the legislative or in the executive branch of the government.

The time appears especially well suited to a review of this character: it is the year fixed by law for ascertaining, for state purposes, the changes in the population, and in the financial, commercial, and industrial interests of the country during the past decade.

The period covered by the examination seems equally suitable: it begins with the year 1860, at the outset of the great rebellion, which gave such a mighty impetus to the thoughts and actions of the American people. The two decades which it embraces constitute a distinct epoch in the history of the postal service as well as of the nation. While, however, the contrasts will in general be between the conditions of the service in 1860 and in 1880, the extraordinary growth of the past twenty years may well be shown by some figures pertaining to other periods, which will accordingly appear among the financial exhibits.

## PERSONNEL.

On the 30th of June, 1860, there were in the service, among other employés, 28,498 postmasters, 474 route-agents, 1,649 mail messengers, 40 local agents, and 68 railroad baggage-masters in charge of express mails.

On the 30th of June, 1880, the number of postmasters in service was 42,989; of railway post-office clerks, 1,206; of route-agents, 1,252; of mail-route messengers, 338; and of local agents, 150.

## TRANSPORTATION.

The following table furnishes a comprehensive exhibit of the transportation of the mails in 1860 and 1880, respectively:

	June 30, 1860.		June 30, 1880.	
	Number of miles of routes.	Number of miles of service performed.	Number of miles of routes.	Number of miles of service performed.
Railroad .....	27, 129	27, 653, 749	85, 320	96, 497, 463
Steamboat .....	14, 976	3, 951, 268	23, 320	5, 068, 538
Star service .....	198, 489	43, 119, 750	235, 248	76, 070, 905
Total.....	240, 594	74, 724, 776	343, 888	178, 236, 906

## FINANCIAL EXHIBITS.

*From 1840 to 1860 and from 1860 to 1880.*—During the fiscal year ending June 30, 1840, the postal receipts were \$4,543,521.92, and the postal expenditures \$4,718,235.64; during the year ending June 30, 1860, the receipts were \$8,518,067.40, and the expenditures \$14,874,772.89; and during the year ending June 30, 1880, the receipts were \$33,315,479.34, and the expenditures \$36,101,820.38.

From 1840 to 1860 the increase in the postal receipts was only eighty-seven per cent., while the increase in the expenditures was *two hundred and fifteen per cent.*

From 1860 to 1880 the increase of postal receipts was *two hundred and ninety-one per cent.*, while the increase of expenditures was only one hundred and forty-two per cent.

In other words, from 1840 to 1860 the increase of expenditures was one hundred and twenty-eight per cent. *above* the increase in receipts; while, on the other hand, from 1860 to 1880 the increase of expenditures was one hundred and forty-nine per cent. *below* the increase in receipts.

From 1840 to 1860 the increase of postal receipts was, as before stated, eighty-seven per cent., and the increase in the population of the United States was eighty-four per cent., the population having been 17,069,453 in 1840, and 31,443,321 in 1860. The same relative increase of postal receipts and population from 1860 to 1880 would, on the basis of the increased postal receipts during that period, give the population in 1880 at 119,788,210.

In 1840 the average contribution of each person in the United States to the postal revenues was about 26 $\frac{3}{4}$  cents; in 1860, about 27 $\frac{7}{8}$  cents; and in 1880 about 67 $\frac{3}{4}$  cents, if the population of 1880 be put at 49,250,000, which is the number ascertained by a careful estimate made by a competent authority. Considering the great reduction in the rates of postage, these figures sufficiently attest alike the increased intelligence of the public, and the popular confidence in the mail service.

*From 1840 to 1880, by decades.*—During the ten years from 1840 to 1850 the aggregate postal expenditures were \$45,240,709.65, and the aggregate receipts \$43,905,811.80, showing a deficiency of \$1,334,897.85, or 2.9 per cent. of the expenditures.

During the ten years from 1850 to 1860 the aggregate postal expenditures were \$105,179,891.54, and the aggregate receipts \$67,981,695.97, showing a deficiency of \$37,198,195.57, or 35.3 per cent.

During the ten years from 1860 to 1870 the aggregate postal expenditures were \$167,400,969.10, and the aggregate receipts \$138,950,664.62, showing a deficiency of \$28,450,304.48, or 16.9 per cent.

During the ten years from 1870 to 1880 the aggregate postal expenditures were \$316,778,563.73, and the aggregate receipts \$267,012,407.68, showing a deficiency of \$49,766,156.05, or 15.7 per cent.

*From 1841 to 1880 by Presidential administrations.*—The figures in each of the following statements embrace the four fiscal years from the 1st of July after the beginning of each administration to the 30th of June after its close. In this way each administration is, of course, made to include the operations of nearly four months of the succeeding administration; but it is, on the whole, the fairest, and, as the accounts of the department are kept, the only practicable way of making a comparison.

From July 1, 1841, to June 30, 1845, the postal expenditures were \$18,666,750.20, and the receipts \$17,370,204.71, showing a deficiency of \$1,296,545.49, or 6.9 per cent. of the expenditures.

From July 1, 1845, to June 30, 1849, the postal expenditures were

\$16,861,478.41, and the receipts \$16,627,895.96, showing a deficiency of \$233,582.45, or 1.3 per cent.

From July 1, 1849, to June 30, 1853, the postal expenditures were \$26,582,570.74, and the receipts \$22,335,840.73, showing a deficiency of \$4,246,730.01, or 15.9 per cent.

From July 1, 1853, to June 30, 1857, the postal expenditures were \$40,459,110.70, and the receipts \$27,172,495.77, showing a deficiency of \$13,286,614.93, or 32.8 per cent.

From July 1, 1857, to June 30, 1861, the postal expenditures were \$56,957,922.64, and the receipts \$32,322,640.73, showing a deficiency of \$24,635,281.91, or 43.2 per cent.

From July 1, 1861, to June 30, 1865, the postal expenditures were \$48,779,085.45, and the receipts \$46,458,022.97, showing a deficiency of \$2,321,062.48, or 4.7 per cent. The insignificance of the deficiency during this period—coextensive with the rebellion—was owing principally to the suspension of mail service in the rebellious States, where the expenditures had been largely in excess of the receipts.

From July 1, 1865, to June 30, 1869, the postal expenditures were \$81,016,286.91, and the receipts \$64,371,124.60, showing a deficiency of \$16,645,162.31, or 20.5 per cent.

From July 1, 1869, to June 30, 1873, the postal expenditures were \$104,132,079.69, and the receipts \$84,721,434.01, showing a deficiency of \$19,410,645.68, or 18.6 per cent.

From July 1, 1873, to June 30, 1877, the postal expenditures were \$132,487,534.05, and the receipts \$109,428,215.17, showing a deficiency of \$23,059,318.88, or 17.4 per cent.

An examination of the foregoing figures shows that up to the beginning of the war, in 1861, the general tendency was to increase the percentage of postal deficiency, while ever since the tendency has been to reduce it. The improvement will be still more apparent if we take the period from 1858 to 1861, the three years prior to the beginning of the war, and compare it with the period from 1877 to 1880, the three years just ended.

During the three years from July 1, 1858, to June 30, 1861, the postal expenditures amounted to \$44,235,452.63, and the postal receipts to \$24,835,847.87, or 56.1 per cent. of the expenditures, leaving a deficiency of \$19,399,604.76, or 43.9 per cent. of the expenditures, to be supplied from the general Treasury.

During the three years ending June 30, 1880, the postal expenditures amounted to \$104,157,787.62, and the postal receipts to \$92,634,979.15, or 89 per cent. of the expenditures, leaving a deficiency of \$11,522,808.47, or 11 per cent. of the expenditures, to be supplied from the general Treasury. This exhibits a saving of expenditures during the three years just ended, as compared to the three years immediately prior to the war, of 32.9 per cent., amounting for the three years to \$34,267,912.12.

*The years 1860 and 1880.*—During the year ending June 30, 1860, the expenditures (without including payments on account of previous years) amounted to \$14,874,772.89, and the postal receipts to \$8,518,067.40, or 57.3 per cent. of the expenditures, leaving a deficiency of \$6,356,705.49, or 42.7 per cent. of the expenditures, to be supplied from the general Treasury.

During the year ending June 30, 1880, the expenditures (not including payments on account of previous years) amounted to \$36,101,820.38, and the postal receipts to \$33,315,479.34, or 92.3 per cent. of the expenditures, leaving a deficiency of \$2,786,341.04, or only 7.7 per cent. of the expenditures, to be supplied from the general Treasury. This is a sav-

ing of expenditures of 35 per cent., or \$12,635,637.13, in favor of 1880 as against 1860.

To sum up the case in brief, in 1860 it cost one dollar for every 57 $\frac{3}{10}$  cents of postal revenue returned, while in 1880, for every dollar expended, about 92 $\frac{3}{10}$  cents of revenue were returned.

*Summary of financial exhibits.*—The following summary presents at a glance the contrasts afforded by the foregoing statements:

	Per cent.
From 1840 to 1860, increase of postal receipts .....	87
From 1840 to 1860, increase of postal expenditures .....	215
From 1860 to 1880, increase of postal receipts .....	291
From 1860 to 1880, increase of postal expenditures .....	142

The appropriations used out of the Treasury on account of insufficiency of postal receipts to meet postal expenditures were:

	Per cent.
From 1840 to 1850 .....	2.9
From 1850 to 1860 .....	35.3
From 1860 to 1870 .....	16.9
From 1870 to 1880 .....	15.7

By Presidential administrations the deficiencies were as follows:

	Per cent.
1841 to 1845 .....	6.9
1845 to 1849 .....	1.3
1849 to 1853 .....	15.9
1853 to 1857 .....	32.8
1857 to 1861 .....	43.2
1861 to 1865 .....	4.7
1865 to 1869 .....	20.5
1869 to 1873 .....	18.6
1873 to 1877 .....	17.4

For the last three years, and for the three years prior to the war, the deficiencies were:

	Per cent.
1858 to 1861 .....	43.9
1877 to 1880 .....	11.6

For the years 1860 and 1880 the deficiencies were:

	Per cent.
1860 .....	42.7
1880 .....	7.7

#### REDUCTION OF POSTAGES.

The reduction of postages since 1860 has been steady and marked. In 1860 the postage on transient domestic letters, for each single rate of one-half ounce, was three cents to points within a radius of 3,000 miles, and ten cents to all points beyond that. Since the 3d of March, 1863, this postage to all points within the United States has been uniform at three cents.

Previous to the act of June 12, 1866, the remailing of letters to changed addresses, the return of undelivered letters bearing a special return request, and the return of dead letters from the dead-letter office, were subject to extra postage; but since that date all this work has been done free of charge. As an evidence of the public appreciation of the return-request system, nearly 44 per cent. of all the letters mailed during the last year bore a request to return if not delivered.

In 1860, the following, now included among "third-class matter," at a postage charge of one cent for each two ounces, were subject to letter rates of postage, viz: "Corrected proof-sheets and manuscript copy ac-



companying the same; prices-current with prices filled out in writing; printed commercial papers filled out in writing (provided such writing is not in the nature of personal correspondence and the papers are not the expression of a monetary value), such as papers of legal procedure, unexecuted deeds of all kinds, way-bills, invoices, unexecuted insurance policies, and the various documents of insurance companies."

The introduction of the postal card in 1873 was a great step in the march of cheap postage, permitting as it does written matter to go through the mails at a postage charge of one cent. So highly have its advantages been appreciated that the issues increased from 91,079,000 for the first year to 272,550,500 for the year 1880, in which they constituted about 20 per cent. of all the articles of postal currency issued.

In 1860 the postage on transient newspapers and circulars was one cent for each ounce; in 1880, one cent for each two ounces.

On books the postage in 1860 was 16 cents per pound under 3,000 miles, and 32 cents beyond that distance; in 1880 the postage is uniform at 8 cents per pound.

On newspapers and periodicals to actual subscribers the rates of postage in 1860 were so greatly varied by weight and frequency of issue that they cannot be better summarized than by the following table, viz:

	Daily.	Six times a week.	Tri-weekly.	Semi-weekly.	Weekly.	Semi-monthly.	Monthly.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
3 ounces and under, per quarter .....	45½	39	19½	13	6½	3	1½
Over 3 and not over 4 ounces, per quarter .....	91	78	39	26	13	6	3
Over 4 and not over 5 ounces, per quarter .....	136½	117	58½	39	19½	9	4½
Over 5 and not over 6 ounces, per quarter .....	182	156	78	52	26	12	6
Over 6 and not over 7 ounces, per quarter .....	227½	195	97½	65	32½	15	7½
Over 7 and not over 8 ounces, per quarter .....	273	234	117	78	39	18	9

*In 1880 the rate on all the matter in the foregoing table is uniform at two cents per pound without regard to frequency of publication or distance.*

The reduction of postage on newspapers and periodicals had been very great from 1860 to 1874; but by the act of June 23, 1874, fixing pound rates, it was simply enormous. This reduction was compensated, however, by the advantages gained by full and universal prepayment, so that the Postmaster-General, speaking of the first year's results of the change, in his report for 1875, was enabled to say: "Under the old law there was no check to insure collections at the office of destination, and the consequence was that much matter went unpaid; and it is a satisfaction that under the present equitable mode, the universal collections have made up for the reductions in the rates."

But great as have been the reductions on domestic matter, they have been largely exceeded by those on foreign matter. By the "General Postal Union Treaty," since 1875 the postage on letters has been uniform at 5 cents for each single rate to all the principal countries of the world. In 1860, the average rate to the countries embraced within the treaty was about 30 cents, or six times the present rate. The reductions on other matter have been correspondingly great. To the reduced charges for postage is to be added the advantage to the public in simplicity in having to deal with one uniform rate to all countries.

Bearing on the subject of cheaper postages, it may be stated that in 1860 less than 21 per cent. of all the stamps issued were under the de-

nomination of three cents, while in 1880 nearly 48 per cent. of all the issues were below three cents.

#### NEW MATTER IN THE MAILS SINCE 1860.

Up to 1860 the functions of the postal service had been confined to the carriage of written and printed matter; but since that year, by a series of acts, they have been enlarged by the introduction into the mails, at exceedingly low rates of postage, of nearly every known substance, of limited weight, "which is not in its form or nature liable to destroy, deface, or otherwise damage the contents of the mail-bag, or harm the person of any one engaged in the postal service."

While this has been a great boon to the public, and particularly to persons in regions not reached by the usual modes of public conveyance, it has very largely increased the volume of mail-matter transported, without yielding a corresponding amount of postal revenue.

In 1860, the following matter, now admitted into the mails, was either unmailable or subject to letter rates of postage when sealed against inspection:

**"THIRD-CLASS MATTER:** *Postage, one cent for each two ounces; weight not to exceed four pounds.*—Hand-bills, posters, chromo-lithographs, engravings, envelopes with printing thereon, heliotypes, lithographs, photographic and stereoscopic views, printed blanks, and cards."

**"FOURTH-CLASS MATTER:** *Postage, one cent for each ounce; weight, four pounds.*—Blank cards, cardboard and other flexible material, flexible patterns, letter envelopes and letter paper without printing thereon, merchandise, models, ornamented paper, sample cards, samples of ores, metals, minerals, seeds, cuttings, bulbs, roots, scions, drawings, plans, designs, original paintings in oil or water colors, and any other matter not included in the first, second, or third classes, and which is not in its form or nature liable to destroy, deface, or otherwise damage the contents of the mail-bag, or harm the person of any one engaged in the postal service."

#### IMPROVEMENTS IN THE POSTAL SERVICE.

The principal innovations in the methods of postal administration since 1860 are the postal-car, the free-delivery, the money-order, and the registry systems, all of which have grown to immense proportions, and are now leading features of the service. Of these somewhat in detail:

##### POSTAL-CAR OR RAILWAY-MAIL SYSTEM.

This system was inaugurated in 1864, superseding the old plan of distributing post-offices. By its means mail-matter is kept in continuous motion, being distributed in transit on all the great arteries of communication, instead of going into post-offices for that purpose. It effects a great saving of time by preventing the delay, for distribution in post-offices, of matter going over connecting lines, and of both time and cost of transportation by its direct deliveries to points of destination along the line of a route, thus avoiding the hauling to and from the terminal office, to which the matter formerly went for distribution.

On the 1st of July, 1880, the system was in operation on about 800 railroads, with an annual service of 65,763,993 miles, on which 2,658,483,220 pieces of mail-matter were distributed in transit during that year.

The "fast mails," whose introduction marked such a bright epoch in the history of the postal service, were the legitimate outgrowth of the postal-car system.

A few instances of the increase of speed in the transportation of the mails may prove of interest. Unfortunately, all the schedules for 1860 cannot be obtained, and some later dates will accordingly appear.

From New York to New Orleans, in 1860, the minimum time was 5½ days; recently it has been reduced to 50 hours; and the arrangement by which this speed is effected, through its connection with other routes, gives the same advantage to nearly all the Southern cities and towns.

From New York to San Francisco, in 1860, the time varied from 20 to 23 days for letter mail, and 35 days for printed matter; at present it is only 6½ days for all kinds of matter.

From New York to Washington, in 1865, the time was 10 hours 55 minutes; at present it is 6 hours.

From New York to Chicago, in 1865, the time was 40 hours 30 minutes; at present it is 33 hours 10 minutes.

From New York to Cincinnati, in 1865, the time was 36 hours; at present it is 23½ hours.

From New York to Saint Louis, in 1865, the time was 51½ hours; at present it is 35 hours.

#### FREE-DELIVERY SYSTEM.

By this system mail-matter may be delivered to given addresses in cities, free of charge (except for the ordinary postages), and collected free of charge from boxes located at convenient points for mailing. It gives to the citizen the option, upon precisely the same terms, of going to the post-office to receive or deliver his mail-matter, or of having it delivered to his residence or collected from the nearest street box. The system was put in operation by the act of March 3, 1863.

On the 30th of June, 1880, it was employed in 104 cities with 2,688 carriers, who handled a total of 932,121,843 pieces of mail-matter during the year, at an average cost to the government of only one-quarter of a cent per piece.

In 1860, through what was known as the "penny-post" system, letters were delivered and collected in 12 cities, at an additional charge to the public of one cent for each piece delivered or collected. In his report for 1860, the Postmaster-General recommended "that the department shall have authority to collect such postage on all letters delivered by carriers as shall be deemed necessary to compensate them for the service, provided that it shall not exceed two cents per letter."

In the same report he states that "the acts of July 2, 1836, and March 3, 1851, contemplated that the same charge should be made for the delivery of letters into the post-office as for their delivery at the domicile of the citizen"; but that "from some unexplained cause this provision of the law was not executed, and the service of delivering letters into the post-office for transmission has been gratuitously performed."

#### THE MONEY-ORDER SYSTEM.

This system was introduced by act of May 17, 1864, upon the recommendation of the Postmaster-General in his reports for the two preceding years. It furnishes a safe means for transmitting small sums of money to all the principal points within the United States and to foreign countries. It is especially adapted to the wants of people of

small means, and its success has been amply demonstrated. On the 1st of July, 1880, the system was in operation at 4,829 post-offices.

The fees on domestic orders range from 10 to 25 cents on amounts varying from \$15 to \$50. During the year ending June 30, 1880, the number of domestic orders issued was 7,240,537, amounting to \$100,352,818.83; the number of orders paid was 7,213,607, amounting to \$99,516,702.46. The average amount of each order issued was \$13.86, and the average fee 12.66 cents. The amount of loss to the government was only \$5,435.38. The net profits were \$257,575.08.

#### THE REGISTRY SYSTEM.

Although the registry system was introduced in 1855, its failure, after five years' trial, was so marked as to render its present extraordinary success all the more conspicuous. The following extract from the report of the Postmaster-General for 1860 is worthy of attention:

The act of March 3, 1855, providing for the registration of valuable letters posted for transmission in the mails of the United States, has now been in operation more than five years, but with results, I regret to add, which have disappointed the expectations that led to the adoption of this novel feature in our postal system. Whether regarded as a precaution for the protection of the interests of this class of correspondents, or as an instrumentality for the detection of depredations upon the mails, the law has proved a failure. The government assumes no responsibility whatever for the loss of letters or packets thus registered, and as they are conveyed in the same pouches, they are surrounded by no greater guarantees for their security, either in transmission or delivery, than such as belong to the ordinary mails of the country. They bear a mark, however, which indicates to all through whose hands they pass their valuable character, and this indication serves rather to suggest and invite depredation than to prevent it. The practical working of our mail system makes it entirely manifest that everything, be it bulk or registry mark, which points out the valuable contents of letters and packets, is as far as possible to be avoided as certainly endangering their safety. The principal argument which has been advanced in support of the existing registry act is that it operates as a safeguard for the rest of the mails by diverting the attention of depredators from them. While this is no doubt true to a degree, it serves rather to confirm than to confute the view which I have presented against the longer continuance of a precaution that is fruitful only in danger to what it was designed to protect. The sagacity of private interest is proverbial, and the following table showing the revenue derived from the registration of letters for the last five years makes it clear that the public are fast losing the confidence with which the registry system was at first received.

Amount of fees collected for registered letters for the fiscal year ending—

June 30, 1856.....	\$31,466 50
June 30, 1857.....	35,876 87
June 30, 1858.....	28,145 16
June 30, 1859.....	25,052 96
June 30, 1860.....	25,938 79

It will be observed that the receipts for 1860 were \$10,838.17, or 30.2 per cent. less than for the year 1857. This exhibits a falling off in the number of letters and packets registered to the amount of 216,760; and yet, during the brief period in which this decline occurred, the general correspondence and revenues of the service increased at least 15.5 per cent. This condition of things can only find an explanation in the fact that correspondents have become convinced that in registering their valuable letters they have been but holding a light for the depredator, instead of darkening his way or embarrassing him in the commission of his crime. In this conviction I fully concur.

Contrast closely the system (!) described above with the system as it exists to-day. Indeed it is a satire on the registry system of 1855 to designate the system of 1860 by the same name. The "principal argument advanced" in favor of the system in 1855 was that it "operated as a safeguard for the rest of the mails by diverting the attention of depredators from them."

In 1860 the only distinction between a registered letter and an ordi-



nary letter was a "mark," which "served rather to invite and suggest depredation than to prevent it." In 1880 the letter is inclosed in a secure envelope of special pattern provided by the government, and followed to its destination by a complete chain of receipts given in succession by postal employes in whose custody it passes until it is handed to the party to whom it is addressed. His receipt is then taken by the delivering postmaster, and returned to the sender of the letter before he can receive the acknowledgment of his correspondent in the usual course of mail.

In 1860, the registered letters, bearing a "mark," were inclosed in ordinary pouches, affording "no greater guarantees for their security, either in transmission or delivery, than such as belong to the ordinary mails of the country." In 1880 they are sent in special pouches, under special locks, the New York office alone having during the past year dispatched 19,387 of these special pouches, containing 559,733 registered letters and parcels.

In 1860 registered letters were carried with no more security than ordinary letters. In 1880, of the registered letters mailed for the public, only one out of every 6,258 was lost. These losses were mostly by robbery by highwaymen in the distant States and Territories, not chargeable to the fault of the postal employes. During the year ending June 30, 1880, 444,365 packages of postage-stamps, stamped envelopes, and postal cards, valued at \$31,887,342.46, were forwarded by registered mail to postmasters throughout the country, with a loss of only four packages, valued at \$63. During 1879, the registered mails carried for the Treasury Department 51,237 packages of United States bonds, currency, national bank notes, silver certificates, internal-revenue stamps, &c., &c., valued at *over one billion dollars*, without the reported loss of a penny. During the last four years the New York post-office received from San Francisco, by registered mail, for the Treasury Department, gold coin and bullion valued at \$23,877,100, without any loss in transit. The postmaster at New York says: "The exchanges of bonds and stocks with foreign countries are made almost exclusively through the registered mails."

The receipts from the registry system in 1860 were \$25,038.70. During 1880 they amounted to \$595,774.30, a considerable share of which was profit.

In 1860 registry fees were collected in money, for the faithful return of which by postmasters the Department could not at any time be absolutely sure. In 1880 postage-stamps (which have been previously charged to postmasters, and for which they are accountable) *must be used* on all registered matter.

From 1857 to 1860 the receipts *decreased* 30.2 per cent. From 1877 to 1880 they *increased* 62.1 per cent., the increase during the last year alone having been nearly 30 per cent. The total number of pieces registered during the last year was 6,996,513, including matter for the government on which no registry fees were paid.

To the direct advantages conferred upon the public by the registry system are to be added the indirect benefits arising two years since from the extension of the system, previously confined to letters, to all classes of matter—a step that was followed by a reduction of rates by the express companies.

These results sufficiently attest the public confidence in the registry system, and verify the remark of the Postmaster-General in 1860, but with a different application, that "the sagacity of private interest is proverbial."



## IMPROVEMENTS IN FINANCIAL ADMINISTRATION, ETC.

In no other respect has the service undergone greater improvement than in the administration of the postal revenues, and to this fact the department is largely indebted for the better financial results that have been exhibited. In 1860 prepayment of postage was only partially compulsory, and much of it was collectible in money, depending solely upon the fidelity of postmasters to account for it. In that year about 20 per cent. of the postages accounted for by postmasters was collected in money, to say nothing of what they failed to collect, or, having collected, failed to account for, in the exercise of the discretion confided to them. In 1880 prepayment is compulsory, full and absolute, upon all classes of matter except letters, which must be prepaid to the extent of at least one full rate. In no case is domestic postage now by law payable in money. The postage on newspapers and periodicals to subscribers was made payable in special stamps in 1874, with the beneficial results already stated, and the last vestige of collections in money for domestic postages was swept away by the introduction in 1879 of "postage-due stamps," for collecting balances on partially prepaid letters. The stamps are charged when issued, and must be accounted for, thus placing it beyond the power of postmasters to retain any of the postage collected without liability to detection and punishment.

Connected with the administration of the postal revenues, it may be mentioned, as an instance of economy in expenditures, that for the year ending June 30, 1880, as compared to the year ending June 30, 1877, the cost of procuring postage-stamps, stamped envelopes, and postal cards—the basis of the revenues—shows a reduction of \$104,960.91, or 15.4 per cent., and an increase in the number of these articles furnished of 307,143,128, or 28.9 per cent.

In 1860, adhesive stamps cost 16½ cents per thousand; in 1880 they are being furnished at a slight fraction less than 10 cents.

While up to 1860 great laxities in accounts were admitted, effective measures are now taken to secure early and faithful settlements. Payment of debts and deposits of surplus funds in the hands of postmasters are closely exacted, and creditors are yielded their dues with the greatest possible promptitude.

During 1860 the payments on account of liabilities of previous years amounted to \$4,296,009.26 (which sum was not included in the expenditures previously given for service in 1860). During 1880, when the expenditures had more than doubled, the payments on account of previous years amounted to only \$440,983.30.

On the 30th June, 1860, the amount reported due by late postmasters (those out of office) was \$565,579.36 (much of which was lost principally in the Southern States by reason of the war). On the 30th June, 1880, when the revenues had been augmented nearly fourfold, and with all the accumulation of previous years, the amount reported due by this class was \$424,637.30, nearly all of which will of course eventually be recovered.

In 1860 the government lost by the defalcation of a single postmaster (at New York City), \$170,947.67, not a penny of which was subsequently recovered, owing to a technical defect in his official bond, concerning which the Postmaster-General, in his report for 1860, said: "It (the bond) was accepted in good faith by the government, without the slightest intimation from any quarter that its execution was informal or incomplete. The gross fraud attempted to be practiced by this concealment was a fitting prelude to the embezzlement which followed, if indeed it was not a systematic preparation for it."

In 1880, the Auditor reports that from April 1, 1877, to June 30, 1880, the losses by bad debts amounted to the insignificant sum of \$2,755.41, out of a total of nearly three hundred million dollars handled by postmasters during that period, and that no recent losses from defective bonds are within his knowledge.

In testimony of the greater honesty and efficiency of the postmasters of the present day, it may be said that 685 postmasters, or 2.4 per cent. of the entire number, were removed during the year ending June 30, 1860, while only 561, or 1.3 per cent., were removed during the year ending June 30, 1880.

In passing, it is to be remarked that the business of the Dead Letter Office is a good criterion as well of the efficiency of the postal service as of the popular intelligence. In 1860, it is estimated that one out of every 118 letters mailed went to the Dead Letter Office; in 1880 the proportion is one out of every 289—results that are creditable as well the popular intelligence as to the postal service of the present day.

#### ABOLITION OF THE WAY-BILL.

Among the minor improvements, a great saving of time and money has been effected by the abolition of what was known as the "way-bill system," in use long prior to 1864. The way-bill was in effect an invoice accompanying each package of letters forwarded, giving a description of the matter, rate of postage, amount of postage paid, and amount remaining due. Transcripts of these were made at the mailing and delivery offices and forwarded with the quarterly accounts to the Auditor at Washington, for the only good purpose, as appears, of ascertaining the compensation of postmasters—now a very simple process. In a letter to the House of Representatives on this subject, the Postmaster-General, in May, 1864, said:

Minute accounts are kept of the postage on all mailable matter sent and received, paid as well as unpaid, involving the necessity of employing many clerks in post-offices for this particular purpose, and also in the office of the Auditor of the Treasury for the Post-Office Department, where the accounts of postmasters are examined. Thus, from Boston, New York, Philadelphia, Cincinnati, and Chicago—only five post-offices—fifty thousand folios of transcript are sent to the Auditor each quarter, the originals being kept in those offices. The whole bulk of accounts from all the post-offices can be reckoned by tons; and they are mainly kept for the purpose of arriving at the allowances to postmasters, which are estimated on the amount of postage collected. For any other purpose the accounts of mails sent and received are practically useless. The great mass of mail matter is prepaid by postage-stamps, which are charged to postmasters, and for which they are held accountable. In this way the revenues of the department are sufficiently protected. If, then, the compensation of postmasters be fixed as proposed, \* \* \* no accounts will be required of mail matter prepaid by stamps, and the work in all the post-offices will be expedited with a great saving of labor and expense. The accounting in the Auditor's Office of this department will be much simplified, and there will be no difficulty in holding postmasters to strict responsibility each quarter; whereas now, in the ordinary course of business, the accounts of a postmaster for a given quarter cannot be adjusted until after the end of the next quarter. There will also be a considerable saving in the items of blanks for post-offices. The estimated cost of paper and printing next year is nearly one hundred thousand dollars, while the proposed change in the form of accounts will require less than one-half of that expenditure.

The extra labor and expense, saying nothing of delays, which that system would involve with the present volume of mail matter, are almost incalculable.

#### ABOLITION OF THE FRANKING PRIVILEGE.

Among other abuses in the postal service that have been reformed since the epoch of the war, that which grew out of the franking privilege

deserves to be mentioned, for it finally became alarming in its magnitude, and created more than ordinary solicitude among the friends of pure and honest administration. So great was the evil that the past reports of Postmasters-General and other documents submitted to the two houses of Congress up to the abolition of the privilege actually teem with protests against it, and with the gravest warning of its consequences.

The franking privilege was originally given to certain officers of the government, to enable them to forward official matter through the mails without incurring private expense, and to that extent it was not regarded as an evil. But when it was made by law to include matter entirely personal and private, and was with that addition extended to thousands of officials all over the land, even the lawful exercise of it became a heavy burden to the Post-Office Department. The abuse of the privilege, however, got to be wide-spread and notorious. Not only were the mails loaded with immense quantities of official matter of a kind often outside of the original intendment of law, but tons of private matter were every day mailed in violation of it. It became common for parties who legitimately possessed the privilege to forward under their frank matter not their own, to deputize others to make unlimited use of their franks, and even to permit fac-similes of them to be engraved and used by many other persons at their discretion. In thousands of cases, too, the franks of officials entitled to the privilege were forged, and tons upon tons of matter bearing such counterfeits were sent at government expense, without much effort at detection, and certainly without punishment. In one instance, indeed, occurring in 1859, where the unauthorized use of a Senator's frank was clearly proven, a court of justice failed to administer any punishment whatever. The evil became intolerable at last—the privilege being exercised by nearly thirty-two thousand persons—fully justifying the remark of the Postmaster-General under whose administration it was abolished, that it had “grown to be an abuse so monstrous” as to “threaten the very life of the service.”

A few extracts from past reports of the department will give, perhaps, a clearer account of the abuse, and the opinions entertained of it, than is contained in the foregoing sketch.

In the report of the Postmaster-General for 1851, he says :

The increasing abuses of the franking privilege render desirable some further legislation in respect thereto. The franking as public documents of matters which are not such; the distributing of franked envelopes to persons not entitled to the franking privilege; the franking as official letters which are not such; the use of the frank to cover innumerable circulars for the benefit of others than the parties who frank them, and the franking of letters of other persons, are presented as some of the existing abuses. All these should, in my judgment, be prohibited by severe penalties, and a conviction of such an offence should deprive the offender of his franking privilege. It is also proper that the attention of Congress should be directed to the fact that the penalty of \$500 imposed by the existing law is found to be insufficient to prevent the counterfeiting of franks, either with or without the assent of the person whose frank is counterfeited.

In the year 1855, when the postal revenue was less than seven million dollars, the Postmaster-General stated that the franked matter passing through the Washington post-office alone for the year amounted, at a low estimate, to nearly a million and a half dollars. He said further:

If the letters and documents thus franked were limited to the public service, the evil would not be so great as it now is; but, low as are the present rates of postage, the frank covers correspondence of every description, and abstracts largely from the Treasury. The department not only carries all this matter free of charge, but likewise pays to every postmaster whose yearly commissions do not amount to the sum of \$2,000 one cent for the delivery of each letter. Though the free matter passing through the mails is very large at the present time, the amount of it is yearly increasing.

In 1856, the Postmaster-General said :

The experience of the past year has satisfied me more fully that this privilege should be speedily abolished. For months during the year, free matter by the ton passes through the mails into every part of the United States, interfering greatly with the regular transmission of the correspondence of the country. When this free matter passes from the railroads, it is almost impracticable to forward it by the ordinary conveyance. The evil is yearly increasing, detracting largely from the revenues of the department, and impairing its efficiency.

In 1859, the Postmaster-General made a very lengthy presentment of the evil, from which the following is quoted :

There can be no enlightened administration of the postal system without a complete knowledge of its financial resources and liabilities, which can never be attained while the incubus of the franking privilege is hanging over it. Under the stifling pressure, too, of this incubus, the department is forced to continual efforts to ameliorate its condition, which must often result in curtailments to be deplored, because they deprive the public of mail accommodations for which they have fully paid, and which they are, therefore, entitled to enjoy.

Another potent reason for the abolition of the franking privilege, as now exercised, is found in the abuses which seem to be inseparable from its existence. These abuses, though constantly exposed and animadverted upon for a series of years, have as constantly increased. It has been often stated by my predecessors, and is a matter of public notoriety, that immense masses of packages are transported under the government frank which neither the letter nor spirit of the statute creating the franking privilege would justify; that a large number of letters, documents, and packages are thus conveyed, covered by the frank of officials, written in violation of law, not by themselves, but by some real or pretended agent; while whole sacks of similar matter, which have never been handled nor seen even by government functionaries, are transported under franks which have been forged. The extreme difficulty of detecting such forgeries has greatly multiplied this class of offences, whilst their prevalence has so deadened the public sentiment in reference to them that a conviction, however ample the proof, is scarcely possible to be obtained. The statute of 1825, denouncing the counterfeiting of an official frank under a heavy penalty, is practically inoperative. I refer you to the case reported at length by the United States attorney for this district, as strikingly illustrating this vitiated public opinion, reflected from the jury box. The proof was complete, and the case unredeemed by a single palliation, and yet the offender was discharged unrebuked, to resume, if it should please him, his guilty task. This verdict of acquittal is understood to have been rendered on two grounds: first, that the accused said he did not commit the offence "to avoid the payment of the postages," and second, that the offence has become so prevalent that it is no longer proper to punish it. These are startling propositions, whether regarded in their legal, moral, or logical aspects. They announce that to render the violation of a statute legal, it is only necessary to render it general, and that the counterfeiter of the frank of a member of Congress, in order to shield himself from punishment, has only, when arrested, to declare that he committed the infamous crime from no hope of pecuniary gain—thus reversing that axiomatic principle of philosophy and of law which teaches that a rational agent shall be held to contemplate and design those results which necessarily follow from his conduct. If such language as this, coming up from the criminal courts of the country, does not arouse Congress to the necessity of promptly reforming this already great and rapidly-growing evil, then it is to be feared that nothing can do so. The franking privilege has thus become an active instrument of public demoralization. When a crime is committed under the influence of strong temptation, a large measure of integrity may remain with the offender; but where an offence like this, essentially mercenary in spirit and creepingly clandestine in its perpetration, is committed for the gain of a few cents, and when such offence becomes widespread in its prevalence, it evidences a condition of the public morals which cannot be contemplated without profound sorrow and the liveliest apprehensions. Did no other reason exist than these abuses and the disastrous consequences to which they lead, Congress would be fully justified in abolishing the franking privilege.

In 1861, the Postmaster-General said :

By the first section of the act approved March 2, 1847, each deputy postmaster, whose compensation for the last preceding year did not exceed \$200, may send through the mails all letters written by himself and receive all addressed to himself on his private business free of postage, the weight not exceeding a half ounce. This privilege is greatly abused. \* \* \* I recommend the repeal of this clause.

In 1862, he again said :

I renew the recommendation made last year that the franking privilege of postmasters be abolished, except for correspondence between them and other officers of the



department upon official business. It should be abolished also as to the correspondence of all persons addressed to the several departments and executive officers of the government, except upon official correspondence addressed by an officer of the government.

The foregoing extracts are sufficient to show to some extent the abuse that grew out of the law conferring the franking privilege—an evil that was finally recognized by Congress, and remedied in 1873 by the absolute repeal of the law and the adoption of official postage-stamps for paying postage on official matter emanating from the several executive departments. Since then it may be said that the postal service has been practically preserved from any similar taint. The free use of the mails for private purposes has been stopped by law. Official matter of the executive departments, it is true, is now carried free in what are known as penalty envelopes, which have almost wholly superseded the official stamp system, and documents printed by order of either house of Congress may be sent free by their members under proper conditions; but no serious abuse of these privileges is known at present to exist. The department, in a word, carries free only matter of a strictly official character, except newspapers circulated within the county of publication.

#### SUMMARY OF GENERAL RESULTS.

The more essential changes in the postal service since 1860 are briefly recapitulated as follows:

1. A heavy reduction of postage, both domestic and foreign, especially on printed matter, and the extension of privileges to the public.

2. The introduction into the mails of small parcels of merchandise and miscellaneous articles at low rates of postage, largely augmenting the volume of mail matter without correspondingly increasing the postal revenues. To the immediate advantages furnished to the public by this measure are to be added the indirect benefits arising from a consequent reduction of charges by other modes of conveyance, notably the express companies.

3. The introduction of the railway post-office, the free-delivery, the money-order, and the registry systems—now among the great pillars of the postal service.

4. Largely-increased “certainty, celerity, and security” in the carriage and delivery of mail matter, improved methods of collecting and accounting for the postal revenues, and, in general, a simplification of all the modes of conducting the public business.

5. A gradual reduction of the appropriations required from the Treasury to meet deficiencies in the postal revenues. While the great object has been rather to promote the public convenience than to profit the postal revenues, there has nevertheless been a steady gain of the receipts on the expenditures, the former having increased 291 per cent. and the latter only 142 per cent. during the last twenty years; and the deficiency required from the Treasury to sustain the service because of its inadequate revenues has been reduced from 42.7 per cent. in 1860 to 7.7 per cent. in 1880, a comparative saving of 35 per cent., or \$12,635,637.13 in the expenditures of the latter year.

These results deserve the wide expressions of popular approval with which they have been met; and the generous confidence reposed by the public should afford not merely a source of present gratification to the postal authorities, but it will doubtless furnish a stimulus to further increase the efficiency and extend the usefulness of the service.



CONCLUSION.

This review cannot be more appropriately concluded than by quoting the closing paragraph of the annual report of the Postmaster-General for the year 1859, in which he described the mission of the postal service, and the abuses to which it had been subjected, in most eloquent language, as follows:

The Post-Office Department, in its ceaseless labors, pervades every channel of commerce and every theater of human enterprise, and while visiting, as it does kindly, every fireside, mingles with the throbbings of almost every heart in the land. In the amplitude of its beneficence, it ministers to all climes and creeds and pursuits, with the same eager readiness, and with equal fullness of fidelity. It is the delicate ear-trump through which alike nations and families and isolated individuals whisper their joys and their sorrows, their convictions and their sympathies, to all who listen for their coming. Naturally enough, such an institution has ever been, and still is, a cherished favorite with the American people. The country has constantly manifested the most intense solicitude for the preservation of its purity and the prosperity of its administration, and it cannot now be disguised that the guilty abuse of its ministrations, and the reckless waste of its hard-earned revenues, connected with the humiliations to which it has in consequence been exposed, have deeply and sadly impressed the public mind.

I have the honor to be, very respectfully, &c.,  
A. D. HAZEN,  
Third Assistant Postmaster-General.  
Hon. HORACE MAYNARD,  
Postmaster-General.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1882, by the Post-Office Department.

OFFICE OF THE POSTMASTER-GENERAL.

Mail depredations and post-office inspectors, including amount necessary for fees to United States attorneys, marshals, &c .....	\$175,000 00
Advertising .....	35,000 00
Preparation and publication of post-route maps, including constant revision of former editions, and furnishing maps, diagrams, and other information by the topographer and assistants .....	50,000 00
Miscellaneous items in the office of the Postmaster-General .....	3,500 00

OFFICE OF THE FIRST ASSISTANT POSTMASTER-GENERAL.

Compensation to postmasters .....	7,800 000 00
Clerks in post-offices .....	3,850,000 00
Letter carriers .....	2,700,000 00
Wrapping paper .....	20,000 00
Wrapping twine .....	55,000 00
Marking and rating stamps .....	15,000 00
Letter balances, scales, and test weights .....	10,000 00
Rent, fuel, and light .....	500,000 00
Office furniture .....	25,000 00
Stationery .....	60,000 00
Miscellaneous and incidental items .....	100 000 00

OFFICE OF THE SECOND ASSISTANT POSTMASTER-GENERAL.

Inland transportation, railroad routes .....	10,288,282 00
Railway post-office car service .....	1,460,000 00
For necessary and special facilities on trunk lines .....	450,000 00
Inland transportation, steamboat routes .....	1,000,000 00
Inland transportation, star routes .....	8,260,000 00
Railway post-office clerks .....	1,550,000 00
Route agents .....	1,275,000 00

Mail-route messengers .....	\$235,000 00
Local agents .....	150,000 00
Mail messengers.....	775,750 00
Mail locks and keys .....	50,000 00
Mail bags and mail-bag catchers.....	220,000 00
Miscellaneous items in the office of the Second Assistant Postmaster-General .....	1,000 00

## OFFICE OF THE THIRD ASSISTANT POSTMASTER-GENERAL.

Postage-stamps.....	113,000 00
Expenses of agency.....	8,100 00
Stamped envelopes and newspaper wrappers.....	515,000 00
Expenses of agency.....	16,000 00
Postal cards.....	296,000 00
Expenses of agency .....	7,300 00
Registered-package envelopes, locks and seals, and post-office and dead-letter envelopes.....	120,000 00
Ship, steamboat, and way letters.....	4,500 00
Engraving, printing, and binding drafts and warrants.....	1,500 00
Miscellaneous items in the office of the Third Assistant Postmaster-General.....	1,000 00

## OFFICE OF SUPERINTENDENT OF FOREIGN MAILS.

Transportation of foreign mails .....	235,000 00
Balances due foreign countries, including the United States' portion of the expenses of the International Bureau at Berne, Switzerland, under the provisions of the Universal Postal Union Convention, concluded at Paris, France, June 1, 1878.....	45,000 00

Total..... 42,475,932 00

Estimated amount which will be provided by the department from its own revenue accruing from postages and other sources, viz:

Ordinary revenues.....	\$38,545,174 10
Money-order receipts.....	300,000 00
	<hr/>
	38,845,174 10

Leaving a deficiency in the revenue of the Post-Office Department to be provided out of the general Treasury ..... 3,630,757 90

OFFICE OF THE POSTMASTER-GENERAL, November 8, 1880

*Cost of inland transportation and the items incident thereto for the years 1879 and 1880, with the appropriation for 1881, and the estimates of the amounts necessary to be appropriated for 1882; showing the percentage of increase and decrease, with the cost, appropriation, and estimate for mail locks and keys, mail bags, and mail-bag catchers.*

Objects.	Cost for 1879.	Cost for 1880.	Per centum in-crease or decrease of 1880 as to 1879.		Appropriation for 1881.	Per centum in-crease or decrease of appropriation of 1881 as to cost for 1880.		Estimate for 1882.	Per centum in-crease or decrease as to appropriation for 1881.	
			Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Routes.....	\$9,567,589 00	\$9,237,045 00	.....	3.00	\$9,315,000 00	00.83	.....	\$10,288,262 00	10.43	.....
new.....	.....	1,261,041 00	.....	.....	1,385,000 00	8.32	.....	1,460,000 00	6.88	.....
t routes.....	125,000 00	150,000 00	20.00	.....	350,000 00	132.33	.....	430,000 00	28.57	.....
utes.....	754,380 00	887,221 00	17.60	.....	900,000 00	1.44	.....	1,000,000 00	11.11	.....
.....	6,401,808 00	7,321,449 00	14.36	.....	7,375,000 00	00.73	.....	8,260,000 00	12.00	.....
.....	1,272,290 00	1,378,160 00	8.32	.....	1,450,000 00	5.21	.....	1,550,000 00	6.89	.....
.....	1,072,420 00	1,138,000 00	6.20	.....	1,225,000 00	7.55	.....	1,275,000 00	4.08	.....
.....	167,640 00	206,540 00	23.19	.....	200,000 00	.....	3.16	235,000 00	17.50	.....
.....	112,531 00	127,280 00	13.11	.....	135,000 00	6.06	.....	150,000 00	11.11	.....
.....	684,174 00	697,298 00	4.98	.....	725,000 00	3.97	.....	775,750 00	7.00	.....
.....	12,781 00	14,728 00	15.23	.....	100,000 00	578.83	.....	50,000 00	.....	50.00
.....	170,266 00	146,602 00	.....	13.89	185,000 00	26.19	.....	220,000 00	18.92	.....
Mail bags and mail-bag catchers.....	.....	.....	.....	.....	.....	.....	.....	1,000 00	.....	.....
For miscellaneous items in the office of the Second Assistant Postmaster-General.....	.....	.....	.....	.....	.....	.....	.....	25,715,092 00	10.24	.....
Total.....	.....	.....	.....	.....	23,826,600 00	.....	.....	.....	.....	.....

\* The cost of railway post-office car service for 1879 was \$1,104,392.

NOTE.—The above estimates are based upon contract prices and annual salaries, irrespective of fines and deductions; hence the apparent discrepancy between this table and the Auditor's statement.

THOS. J. BRADY,

Second Assistant Postmaster-General.

*Statement showing appropriations for the fiscal year ended June 30, 1880, and the expenditures made by items up to September 30, 1880, out of said appropriations.*

Title of appropriations.	Amount of appropriation, including special acts.	Expended.	Balance unexpended.	Excess of expenditures.
Compensation of postmasters.....	\$7,550,000 00	\$7,708,407 54	.....	\$158,407 54
Compensation of clerks for post-offices.....	3,600,000 00	3,507,793 02	\$32,206 98	.....
Compensation of letter-carriers.....	2,415,000 00	2,803,717 71	51,282 20	.....
Wrapping-paper.....	20,000 00	20,000 00	.....	.....
Twine.....	50,244 00	50,244 00	.....	.....
Postmarking and canceling stamps.....	12,000 00	11,999 60	40	.....
Letter balances.....	6,000 00	5,999 90	10	.....
Rent, light, and fuel for post-offices.....	425,000 00	364,018 15	60,981 85	.....
Stationery.....	50,000 00	48,284 81	1,715 19	.....
Furniture for post-offices.....	20,000 00	16,678 12	3,321 88	.....
Miscellaneous, office of First Assistant Postmaster-General.....	90,000 00	77,210 86	12,789 14	.....
Inland mail transportation, railroad.....	9,150,000 00	8,198,591 52	951,408 48	.....
Inland mail transportation, star.....	7,100,000 00	6,925,274 98	174,725 02	.....
Inland mail transportation, steamboat.....	900,000 00	789,101 65	110,898 35	.....
Transportation by postal cars.....	1,250,000 00	1,141,545 19	108,454 81	.....
Compensation of railway post-office clerks.....	1,370,000 00	1,367,463 35	2,536 65	.....
Compensation of route-agents.....	1,125,000 00	1,116,697 97	8,302 03	.....
Compensation of mail-route messengers.....	185,000 00	174,854 38	10,145 62	.....
Compensation of local agents.....	120,000 00	119,423 79	576 21	.....
Compensation of mail-messengers.....	675,000 00	667,421 32	7,578 68	.....
Mail locks and keys.....	15,000 00	3,766 50	11,233 50	.....
Mail bags and catchers.....	185,000 00	131,022 26	53,977 74	.....
Post-route maps.....	41,945 87	41,945 87	.....	.....
Mail depredations and special agents, including rewards and fees to United States marshals, attorneys, &c.....	150,000 00	146,863 27	3,136 73	.....
Postage-stamps.....	92,000 00	89,184 14	2,815 86	.....
Distribution of postage-stamps.....	8,100 00	7,365 71	734 29	.....
Stamped envelopes and newspaper-wrappers..	485,256 33	418,009 55	67,246 78	.....
Distribution of stamped envelopes and newspaper-wrappers.....	16,000 00	15,254 17	745 83	.....
Postal cards.....	200,000 00	191,218 11	8,781 89	.....
Distribution of postal cards.....	7,300 00	6,998 08	301 32	.....
Official, dead-letter, and registered-package envelopes, locks and seals.....	69,743 67	69,743 67	.....	.....
Ship, steamboat, and way letters.....	4,500 00	1,355 51	3,144 49	.....
Engraving, printing, and binding drafts and warrants.....	1,500 00	1,191 47	308 53	.....
Advertising.....	60,000 00	27,149 86	32,850 14	.....
Miscellaneous, office of Postmaster-General...	1,500 00	1,485 06	14 94	.....
Foreign mail transportation.....	260,000 00	206,000 35	53,999 65	.....
Balances due foreign countries.....	45,000 00	7,538 34	37,461 66	.....
Postal Union postages.....	1,000 00	1,000 00	.....	.....
<b>Total.....</b>	<b>87,757,089 87</b>	<b>36,101,820 38</b>	<b>1,813,677 03</b>	<b>158,407 54</b>

Deducting excess of expenditures (\$158,407.54) from the above "balance unexpended" (\$1,813,677.03) the actual balance of unexpended appropriations will be \$1,655,269.49.

A. D. HAZEN,  
Third Assistant Postmaster-General.

*Postage-stamps, stamped envelopes, newspaper-wrappers, and postal cards issued during the fiscal year ending June 30, 1880.*

Description.	Quarter ending September 30, 1879.	Quarter ending December 31, 1879.	Quarter ending March 31, 1880.	Quarter ending June 30, 1880.	Total.
<i>Ordinary postage-stamps.</i>					
One-cent .....	42,968,000	54,511,200	66,025,900	62,944,700	226,449,800
Two-cent .....	16,289,750	18,865,550	23,080,800	18,349,500	76,585,700
Three-cent .....	128,951,300	129,452,900	148,615,700	134,583,700	541,603,600
Five-cent .....	2,606,180	3,021,100	3,847,340	3,297,160	12,771,780
Six-cent .....	1,496,150	1,329,200	1,850,000	1,689,350	6,364,700
Ten-cent .....	2,209,580	2,266,220	3,194,350	2,679,780	10,349,930
Fifteen-cent .....	266,120	243,140	307,440	298,420	1,115,120
Thirty-cent .....	84,640	95,280	134,010	101,620	415,550
Ninety-cent .....	7,700	7,080	5,620	5,390	25,790
Value .....	\$5,137,290 00	\$5,334,866 00	\$6,294,527 00	\$5,648,245 00	\$22,414,928 00
<i>Newspaper and periodical stamps.</i>					
Two-cent .....	100,620	99,705	97,640	124,220	422,185
Four-cent .....	57,325	58,555	56,655	68,260	240,795
Six-cent .....	38,335	37,320	37,470	44,025	157,150
Eight-cent .....	27,750	26,930	28,410	34,240	117,330
Ten-cent .....	62,965	61,835	61,707	73,019	259,526
Twelve-cent .....	28,035	26,965	27,090	31,290	113,380
Twenty-four-cent .....	26,900	22,475	26,170	30,405	105,950
Thirty-six-cent .....	15,890	12,135	13,580	15,670	57,275
Forty-eight-cent .....	11,040	9,620	9,965	10,995	41,620
Sixty-cent .....	14,250	10,820	13,040	18,435	56,545
Seventy-two cent .....	7,640	4,370	6,630	7,005	25,645
Eighty-four-cent .....	6,405	3,805	6,485	6,515	23,210
Ninety-six-cent .....	12,725	11,910	11,745	14,010	50,390
One dollar and ninety-two-cent .....	7,940	6,810	7,295	7,675	29,720
Three-dollar .....	8,075	5,964	7,498	7,582	29,119
Six-dollar .....	3,441	3,679	3,606	3,270	13,996
Nine-dollar .....	2,138	2,205	1,505	2,206	8,144
Twelve-dollar .....	2,161	2,657	1,851	2,935	9,604
Twenty-four-dollar .....	1,035	939	1,043	1,291	4,308
Thirty-six-dollar .....	540	452	779	550	2,321
Forty-eight-dollar .....	350	421	381	753	1,905
Sixty-dollar .....	1,093	1,153	1,153	1,565	4,964
Value .....	\$299,558 60	\$289,763 80	\$298,681 90	\$364,899 00	\$1,252,903 30
<i>Postage-due stamps.</i>					
One-cent .....	196,900	258,000	349,900	394,200	1,199,000
Two-cent .....	200,800	146,200	167,700	180,300	695,000
Three-cent .....	390,700	640,400	1,013,000	955,800	2,999,900
Five-cent .....	377,700	78,000	152,400	159,400	767,500
Ten-cent .....	194,200	65,800	123,400	119,400	502,800
Thirty-cent .....	47,480	5,000	700	11,100	64,280
Fifty-cent .....	35,870	10,000	100	10,050	56,020
Value .....	\$88,190 00	\$41,696 00	\$57,463 00	\$64,487 00	\$251,836 00
<i>Ordinary stamped envelopes and wrappers.</i>					
One-cent .....	5,618,750	7,591,000	9,560,250	9,335,500	32,105,500
Two-cent .....	580,500	948,000	855,000	779,000	3,162,500
Three-cent .....	14,630,900	15,644,050	17,264,000	15,540,950	63,079,900
Five-cent .....	23,750	17,500	25,250	36,250	102,750
Six-cent .....	30,200	41,700	41,100	44,400	157,400
Ten-cent .....	1,500	1,000	1,100	.....	3,600
Fifteen-cent .....	.....	2,500	250	250	3,000
Thirty-cent .....	1,000	250	.....	.....	1,250
Ninety-cent .....	.....	100	.....	.....	100
One-cent wrappers .....	6,907,750	6,463,250	7,821,500	7,802,000	28,994,500
Two-cent wrappers .....	670,500	660,250	747,750	612,500	2,691,000
Value .....	\$645,725 19	\$704,837 45	\$794,954 08	\$732,509 81	\$2,878,026 53
<i>Stamped envelopes bearing a request to return.</i>					
One-cent .....	661,000	1,225,500	1,407,500	1,289,500	4,583,500
Two-cent .....	654,000	611,500	618,500	575,000	2,459,000
Three-cent .....	17,004,250	17,903,250	18,291,500	16,231,500	69,530,500
Five-cent .....	5,000	11,000	8,500	13,000	37,500
Six-cent .....	38,500	63,500	65,000	67,500	234,500
Fifteen-cent .....	.....	.....	.....	500	500
Value .....	\$579,535 40	\$613,537 50	\$628,494 60	\$559,787 65	\$2,381,355 15



*Postage-stamps, stamped envelopes, &c.—Continued.*

Description.	Quarter ending September 30, 1879.	Quarter ending December 31, 1879.	Quarter ending March 31, 1880.	Quarter ending June 30, 1880.	Total.
<i>Postal cards.</i>					
One-cent .....	63, 324, 500	67, 990, 000	70, 536, 000	67, 903, 500	260, 754, 000
Two-cent .....		1, 931, 500	654, 000	211, 000	2, 796, 500
Value .....	\$633, 245 00	\$718, 530 00	\$718, 440 00	\$683, 255 00	\$2, 753, 470 00
<i>Official postage-stamps.</i>					
One-cent .....	12, 000	513, 050	514, 500	500, 000	1, 539, 550
Two-cent .....	27, 000	23, 500	27, 500		78, 000
Three-cent .....	248, 000	279, 300	225, 633	13, 000	765, 933
Six-cent .....	64, 000	115, 700	153, 733	6, 000	339, 433
Seven-cent .....		25	28		53
Ten-cent .....	5, 000	418, 025	9, 550		432, 575
Twelve-cent .....	22, 000	21, 025	48, 730		91, 755
Fifteen-cent .....	26, 000	12, 525	12, 725		51, 250
Twenty-four cent .....		7, 525	4, 500		12, 025
Thirty-cent .....	10, 500	11, 025	13, 516	2, 000	37, 041
Ninety-cent .....	1, 000	1, 525	1, 855		4, 380
Value .....	\$23, 030 00	\$73, 613 50	\$37, 205 58	\$6, 350 00	\$140, 199 08
<i>Official stamped envelopes and wrappers issued to War Department.</i>					
Three-cent .....	125, 000	81, 000	85, 000	80, 000	371, 000
One-cent wrappers .....		250, 000			250, 000
Value .....	\$1, 000 00	\$5, 377 40	\$2, 703 00	\$2, 544 00	\$14, 624 40

## RECAPITULATION.

Description.	Number.	Amount.
Ordinary postage-stamps .....	875, 681, 970	\$22, 414, 928 00
Newspaper and periodical stamps .....	1, 770, 082	1, 252, 903 30
Ordinary stamped envelopes, plain .....	98, 616, 000	2, 496, 238 93
Ordinary stamped envelopes, request .....	76, 835, 500	2, 381, 855 15
Total stamped envelopes .....	175, 451, 500	4, 877, 594 08
Newspaper-wrappers .....	31, 685, 500	381, 787 60
Postage-due stamps .....	6, 284, 500	251, 836 00
Postal cards .....	272, 550, 500	2, 753, 470 00
Official postage-stamps .....	3, 351, 995	140, 199 08
Official stamped envelopes and wrappers .....	621, 000	14, 624 40
Whole number and value of stamps, stamped envelopes, and wrappers.	1, 367, 397, 047	32, 067, 342 46

A. D. HAZEN,  
Third Assistant Postmaster-General.

Statement showing the issue of postage-stamps, stamped envelopes, newspaper wrappers, and postal cards, by denominations, for the fiscal year ending June 30, 1880.

Denominations.	Number of ordinary stamps, including postage-due stamps.	Number of stamped envelopes and newspaper wrappers.	Number of postal cards.	Number of newspaper and periodical stamps.	Total.
One-cent .....	227, 648, 800	65, 683, 500	269, 754, 000	.....	563, 086, 300
Two-cent .....	77, 280, 700	8, 312, 500	2, 796, 500	422, 185	88, 811, 805
Three-cent .....	544, 003, 500	132, 600, 400	.....	.....	677, 203, 900
Four-cent .....	.....	.....	.....	240, 795	240, 795
Five-cent .....	13, 539, 280	140, 250	.....	.....	13, 679, 530
Six-cent .....	6, 364, 700	391, 900	.....	157, 150	6, 913, 750
Eight-cent .....	.....	.....	.....	117, 330	117, 330
Ten-cent .....	10, 852, 730	3, 600	.....	259, 526	11, 115, 856
Twelve-cent .....	.....	.....	.....	113, 380	113, 380
Fifteen-cent .....	1, 115, 120	3, 500	.....	.....	1, 118, 620
Twenty-four-cent .....	.....	.....	.....	105, 950	105, 950
Thirty-cent .....	479, 830	1, 250	.....	.....	481, 080
Thirty-six-cent .....	.....	.....	.....	57, 275	57, 275
Forty-eight-cent .....	.....	.....	.....	41, 620	41, 620
Fifty-cent .....	56, 020	.....	.....	.....	56, 020
Sixty-cent .....	.....	.....	.....	51, 545	51, 545
Seventy-two-cent .....	.....	.....	.....	25, 645	25, 645
Eighty-four-cent .....	.....	.....	.....	23, 210	23, 210
Ninety-cent .....	25, 790	100	.....	.....	25, 890
Ninety-six-cent .....	.....	.....	.....	50, 390	50, 390
One dollar and ninety-two-cent .....	.....	.....	.....	29, 720	29, 720
Three-dollar .....	.....	.....	.....	29, 119	29, 119
Six-dollar .....	.....	.....	.....	13, 996	13, 996
Nine-dollar .....	.....	.....	.....	8, 144	8, 144
Twelve-dollar .....	.....	.....	.....	9, 604	9, 604
Twenty-four-dollar .....	.....	.....	.....	4, 308	4, 308
Thirty-six-dollar .....	.....	.....	.....	2, 321	2, 321
Forty-eight-dollar .....	.....	.....	.....	1, 905	1, 905
Sixty-dollar .....	.....	.....	.....	4, 964	4, 964
Aggregate .....	881, 966, 470	207, 137, 000	272, 550, 500	1, 770, 082	1, 363, 424, 052
Value .....	\$22, 666, 764 00	\$5, 259, 381 68	\$2, 753, 470 00	\$1, 252, 903 30	\$31, 932, 518 98
	Number of official stamps issued to executive departments.	Number of official stamped envelopes and wrappers.			Total.
One-cent .....	1, 539, 550	250, 000	.....	.....	1, 789, 550
Two-cent .....	78, 000	.....	.....	.....	78, 000
Three-cent .....	765, 933	371, 000	.....	.....	1, 136, 933
Six-cent .....	339, 433	.....	.....	.....	339, 433
Seven-cent .....	53	.....	.....	.....	53
Ten-cent .....	432, 575	.....	.....	.....	432, 575
Twelve-cent .....	91, 755	.....	.....	.....	91, 755
Fifteen-cent .....	51, 250	.....	.....	.....	51, 250
Twenty-four-cent .....	12, 025	.....	.....	.....	12, 025
Thirty-cent .....	37, 041	.....	.....	.....	37, 041
Ninety-cent .....	4, 380	.....	.....	.....	4, 380
Aggregate .....	3, 351, 995	621, 000	.....	.....	3, 972, 995
Value .....	\$140, 199 08	\$14, 624 40	.....	.....	\$154, 823 48
Total number .....	885, 318, 465	207, 758, 000	272, 550, 500	1, 770, 082	1, 367, 397, 047
Total value .....	\$22, 806, 963 08	\$5, 274, 006 08	\$2, 753, 470 00	\$1, 252, 903 30	\$32, 087, 342 46

A. D. HAZEN,  
Third Assistant Postmaster-General.

Table showing increase of letters and parcels registered and fees collected at the twenty-five leading cities in the country during the fiscal year ended June 30, 1880, over the amount for preceding year.

Cities and States.	Year ended June 30, 1879.				Year ended June 30, 1880.				Increase.			
	Letters.		Parcels.		Total.	Letters.		Parcels.		Total letters and parcels.	Fees.	
	Number.	Dollars.	Number.	Dollars.		Number.	Dollars.	Number.	Dollars.		Per. ct.	Per. ct.
New York, N. Y.....	207, 731	27, 737 50	277, 375	27, 737 50	395, 380	242, 857	39, 538 00	82, 879	11, 800 50	118, 005	42. 5	42. 5
Philadelphia, Pa.....	49, 852	5, 706 60	57, 066	5, 706 60	79, 623	50, 440	7, 962 30	12, 969	2, 255 70	22, 557	39. 5	39. 5
Brooklyn, N. Y.....	18, 912	2, 175 00	21, 750	2, 175 00	30, 663	23, 626	3, 066 30	4, 199	891 20	8, 913	41. 0	41. 0
Chicago, Ill.....	45, 828	5, 855 80	58, 558	5, 855 80	90, 179	61, 232	9, 017 90	16, 217	3, 162 10	31, 621	54. 0	54. 0
Saint Louis, Mo.....	25, 425	3, 465 50	34, 655	3, 465 50	50, 493	29, 618	5, 049 30	11, 645	1, 583 80	15, 838	45. 4	45. 4
Boston, Mass.....	51, 949	5, 895 00	58, 950	5, 895 00	82, 983	62, 882	8, 299 30	13, 110	2, 404 30	24, 043	40. 8	40. 8
Baltimore, Md.....	17, 213	1, 864 10	18, 641	1, 864 10	23, 067	18, 998	2, 306 70	2, 641	442 60	4, 426	23. 8	23. 8
Cincinnati, Ohio.....	14, 595	1, 743 10	17, 431	1, 743 10	24, 411	19, 794	2, 441 10	1, 781	698 00	6, 980	40. 0	40. 0
San Francisco, Cal.....	39, 936	5, 330 40	53, 304	5, 330 40	62, 280	40, 060	6, 228 00	8, 252	897 60	8, 976	16. 8	16. 8
New Orleans, La.....	25, 289	2, 669 50	26, 605	2, 669 50	30, 595	28, 141	3, 059 50	1, 048	390 00	3, 900	14. 6	14. 6
Washington, D. C.....	49, 380	5, 114 60	51, 146	5, 114 60	54, 883	51, 451	5, 438 30	1, 166	323 70	3, 237	6. 3	6. 3
Cleveland, Ohio.....	11, 460	1, 230 60	12, 306	1, 230 60	18, 418	17, 238	1, 841 80	334	611 20	6, 112	49. 7	49. 7
Buffalo, N. Y.....	8, 098	836 90	8, 369	836 90	10, 111	9, 569	1, 011 10	271	174 20	1, 742	20. 8	20. 8
Newark, N. J.....	7, 974	905 60	9, 056	905 60	12, 650	10, 705	1, 265 00	863	359 40	3, 594	39. 7	39. 7
Louisville, Ky.....	11, 169	1, 256 80	12, 568	1, 256 80	26, 498	19, 350	2, 649 80	5, 748	1, 393 00	13, 930	110. 8	110. 8
Pittsburgh, Pa.....	11, 623	1, 270 50	12, 705	1, 270 50	16, 959	14, 015	1, 695 90	1, 862	425 40	4, 254	33. 5	33. 5
Jersey City, N. J.....	3, 476	355 00	3, 550	355 00	4, 132	3, 912	413 20	146	58 20	582	16. 4	16. 4
Detroit, Mich.....	6, 798	775 20	7, 752	775 20	11, 018	9, 399	1, 101 80	665	826 60	3, 266	42. 1	42. 1
Milwaukee, Wis.....	7, 661	833 90	8, 339	833 90	10, 051	9, 111	1, 005 10	262	171 20	1, 712	20. 5	20. 5
Albany, N. Y.....	6, 823	696 30	6, 963	696 30	7, 960	6, 877	796 00	943	99 70	997	14. 3	14. 3
Providence, R. I.....	6, 002	644 40	6, 444	644 40	9, 653	7, 688	965 30	1, 543	320 90	3, 209	49. 8	49. 8
Rochester, N. Y.....	7, 431	804 20	8, 042	804 20	10, 155	6, 465	1, 015 50	3, 079	211 30	2, 113	26. 4	26. 4
Allegheny, Pa.....	2, 880	310 60	3, 106	310 60	5, 331	4, 847	533 10	258	222 50	2, 225	71. 6	71. 6
Richmond, Va.....	6, 762	712 90	7, 129	712 90	8, 576	7, 533	857 60	676	144 70	1, 447	20. 3	20. 3
New Haven, Conn.....	5, 746	629 70	6, 297	629 70	7, 338	6, 615	733 80	172	104 10	1, 041	16. 5	16. 5
Total .....	650, 012	78, 819 70	788, 197	78, 819 70	1, 082, 917	772, 003	108, 291 70	172, 729	29, 472 00	294, 720	37. 4	37. 4

\* Decrease.

A. D. HAZEN,  
Third Assistant Postmaster-General.

## POSTAL SAVINGS BANKS.

OFFICE OF POST-OFFICE INSPECTOR,  
MONEY-ORDER SYSTEM,

*Washington, D. C., November 6, 1880.*

SIR: Agreeably to your request, I have the honor to submit for your consideration the following brief memoranda relative to post-office savings banks.

The author of a well written paper entitled "Savings and Savings Banks," published January, 1878, in the British Quarterly Review, says:

M. Alphonse de Candolle gives the following as the order in which savings banks were founded: Hamburg, 1778; Berne, 1787; Basle, 1792; Geneva, 1794; England, (Tottenham,) 1798. A later writer, Herr Ehrenberger, has discovered that a savings bank was in existence in Brunswick in 1765. It is not worth while to pause to investigate these claims. Wherever savings banks were instituted, it was the idea of providing some safe place for the deposit of money, and of allowing it to accumulate interest, instead of lying useless in the secret drawer, the buried pot, the old stocking, or the bedtick. \* \* \* A great and good work was done by the establishment of these savings banks. They fostered habits of thrift in the people; they called attention to the duty of providing for rainy days in the future; they were the source from which many kindred societies for the cultivation of saving habits had their origin; and they were, moreover, the stepping stones to the establishment of post-office savings banks. All honor to the men and women who gave time and money to the cause, who labored zealously for the good of their poorer countrymen, and who laid the foundation of a system, the model upon which the savings banks of other countries are based.

Post-office savings banks were first authorized in the United Kingdom by act of Parliament, May 17, 1861, and were first opened to the public September 16 of the same year, at 300 post-offices. December 31, 1862, at the close of the first full year's business, 2,535 offices were in operation. December 31, 1879, they numbered 6,016. During the first 15½ months, ending with December 31, 1862, the deposits amounted to £2,114,669; in 1879 they were £9,887,109. December 31, 1862, the amount standing to the credit of depositors was £1,698,221. December 31, 1879, it had risen to £32,012,134, or \$155,899,092.98 United States money. During all these nineteen years, the tendency has been steadily upward; no single year shows a decrease from its predecessor. The number of depositors' accounts at the close of last year was 1,988,477, and the average amount standing to the credit of each was £16 1 11¾ (\$88.40). Notwithstanding the great distress in Ireland during the last year, the deposits in post-office savings banks steadily increased, and the amount standing to the credit of depositors in Irish post-offices was \$446,009.21 greater at the close of the year than at its beginning. These figures sufficiently attest the popularity of the system with the British masses. So great has been the demand for savings-bank accommodations that the postmaster general of that country two years ago detailed clerks to attend at great public works, at a distance from post-office facilities, in order to receive deposits from, and furnish money-orders to, the workmen. The success attending the experiment induced him to extend it last summer to the most important agricultural centers. In November, 1879, through the courtesy of the controller, I was permitted to inspect the savings-bank division of the British post-offices, and was furnished with valuable data relative to its business. In every town visited in England, I was struck with the enthusiasm which pervaded all classes, after nearly twenty years' trial, in regard to this institution, which is, in every sense, the workingman's friend. The interest.

upon deposits is only two and one-half per centum, proving that security is more sought after than large profits.

A nearly equal ratio of success, upon a small scale, has attended the post-office banks of Canada, of Italy, and of other countries where they have been established. The average amount standing to the credit of each Canadian account June 30, 1880, was \$125.80, a little over 50 per centum more than in Great Britain. The rate of interest paid to depositors by the Canadian office is four per cent.

December 18, 1873, House bill No. 797, entitled "A bill to establish and maintain a National Savings Depository as a branch of the Post-Office Department," was introduced by Hon. Horace Maynard, of Tennessee, now Postmaster-General, and was referred to the Committee on Banking and Currency. A majority of the committee were unfavorable to the measure, and the House took no action upon it. Similar bills were presented by Mr. Tipton, of Illinois, in 1877, and Mr. Waddell, of North Carolina, in 1878. March 21, 1878, Mr. Waddell's bill was reported with amendments by the Committee on the Post-Office and Post-Roads, and was recommitted. It never reached a vote.

During the agitation of this question, which began in the United States nearly ten years ago, there has been a steadily increasing popular sentiment in favor of a postal savings depository, and such journals as the Herald, Tribune, Times, Post, Harpers' Weekly, and Graphic, of New York, the Baltimore American, the Inter Ocean, of Chicago, the Globe Democrat, of Saint Louis, the National Republican, of Washington, and many others, have lent their columns to the advocacy of the measure. I have in my possession more than a hundred extracts from different influential periodicals, published in all parts of the United States, from New England to Florida and Texas, which indicate that this sentiment is almost unanimous among the masses.

The principal advantages claimed for the measure may be summed up as follows:

1st. It would encourage economy and habits of thrift among the laboring classes, by the certain protection that would be afforded thereby to their surplus earnings, which, for the want of a reliable cache, are now intrusted to insecure private banks, or investments, or are secreted beneath floors, in chimney crevices, under stumps in the fields and forests, or in other equally unsafe hiding places, or, worse still, are wasted in extravagance and dissipation.

2d. It would accommodate *all classes* in the many sections where no banks exist, and in all sections its system of cross deposits and withdrawals, which enable the depositor to make use of any post-office depository in the country, would commend it to public favor.

3d. It would tend to force from weird hiding places, and to add to the circulation of the country, many millions of dollars now worse than idle, especially in the south and southwest, where few banks exist.

4th. It would promote loyalty and patriotism. Each depositor would have a direct and substantial interest in the stability and prosperity of the government intrusted with the safe keeping and safe return of his treasure.

5th. It would protect a class unable to protect itself—the toiling millions—against swindlers and robbers, fire and flood, unsafe investments and unsound banks, against improvidence, recklessness, and dissipation.

6th. It would strengthen the finances of the nation by giving it a first lien upon the accumulated proceeds of the industries of its own citizens.

7th. It would go far towards securing the best possible service in post-



offices in the person of postmasters and clerks, whose ability to give bonds for the correct and faithful discharge of their duties would, with few exceptions, depend upon their integrity, intelligence, and standing in community.

8th. It would, by absorbing a large portion of the national debt, keep at home and in circulation a large amount of money now sent abroad to pay interest on securities held by the foreign creditors of the government.

9th. It would be a bulwark of defense against panics and financial crises. Runs would not be made upon post-office banks, nor would their doors or their coffers ever be closed against a depositor's draft so long as a dollar remained to his credit on his pass-book. Their funds would constitute a reserve upon which the masses could implicitly rely in times of financial disaster and business depression.

Banking interests have generally, at the start, arrayed themselves in antagonism to post-office banks, through fear that the latter would become powerful competitors, interfering with their business, and reducing the amount of their deposits. This fear does not appear to be well founded. The persons who patronize the post-office savings banks are, for the most part, of a class who seldom trust or make use of the private savings bank. This would be especially true, as heretofore stated, in sections where few banks exist. Mr. Robert P. Porter, of Chicago, in an excellent paper on "Post-Office Savings Banks," read May 22, 1878, before the American Social Science Association, then in session at Cincinnati, says, "The old savings banks in England have over \$10,000,000 more savings on deposit to-day than they had when the postal banks started."

From the report of Hon. John Jay Knox, Comptroller of the Currency, for the fiscal year ended June 30, 1879 (see pages CXV and CXVI), it appears that the depositors in private savings banks in the United States, on the last-named date, numbered 2,268,707, and their deposits amounted to \$802,490,298, being an average of \$353.72 to each depositor. In 1876, four years previous, such deposits amounted to \$891,459,890, since which time they have steadily decreased. Mr. Knox states that the losses sustained by depositors in State, savings, and private banks, during the three years next prior to January 1, 1879, amounted to \$32,616,661, and that the depositors in the twenty-two savings banks which failed in the city of New York during eight years lost \$4,475,061.

It appears from the public-debt statement for October, 1880, a copy of which I inclose, that the aggregate amount of six, five, and four and one-half per cent. bonds redeemable in 1881 is \$673,224,800, which might be refunded at a lower rate of interest as an investment for the postal savings depository, upon a plan similar to that set forth in section 4 of the bill reported March 21, 1878, by the post-office committee of the House of Representatives.

April 26, 1878, a mass-meeting of the depositors of the Sixpenny Savings Bank of New York was held at Germania Assembly Rooms. In the preamble to the resolutions passed by this meeting it was stated that, from November, 1871, to April, 1878, 76,834 innocent depositors had been defrauded by the failures of savings banks. The last of the resolutions passed by this meeting was as follows:

*Resolved*, That a committee be appointed to draft a memorial to Congress, and to secure signatures to the same, to urge upon that body the passage of a law by which postal savings banks, under the immediate direction of the general government, may be established throughout the country, thus affording to all classes of society an opportunity of depositing their money with absolute security, and giving to the poor

the same privilege and protection as are now given to the rich holders of government securities.

I am, sir, very respectfully,

M. LA RUE HARRISON,  
*Post-Office Inspector for the Money-Order System.*

Hon. HORACE MAYNARD,  
*Postmaster-General.*

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## PROPOSED MODIFICATIONS OF THE MONEY-ORDER SYSTEM.

POST-OFFICE DEPARTMENT,  
OFFICE OF SUPERINTENDENT MONEY-ORDER SYSTEM,  
*Washington, D. C., October 27, 1880.*

SIR: The postal money-order system was established to promote public convenience by providing a safe means of transferring small sums by mail, and thereby to diminish the frequency of the transmission of money in ordinary letters, which has always been one of the chief causes of the loss of correspondence. It has been the desire of the department that the fees charged for money-orders should be fixed at rates that would meet the necessary expenses of the system, but not yield any considerable revenue. Since the establishment of the money-order system in 1864 the rates of fees have been changed four times, but the receipts have never equaled the expenditures until within the last five years. During the first two years the fees were ten cents for orders not exceeding \$10, fifteen cents for orders over \$10 and not exceeding \$20, and twenty-five cents for orders over \$20, the maximum limit being \$30. The expenditures exceeded the receipts by \$32,879.38, expenses to the amount of \$32,970.20 having been paid out of appropriations. During the next two years ended June 30, 1868, under the operation of the fees fixed by the act of June 12, 1866, to wit, ten cents for sums not exceeding \$20, and twenty-five cents for sums above \$20, with an increase of the maximum limit of the order to \$50, although the gross revenue from the business amounted to \$80,418.76, there was a net loss of \$3,107.72. The expenses paid out of appropriations amounted to \$83,526.48.

Under the provisions of the act of July 27, 1868, a new schedule of fees was in operation for the period of four years ended June 30, 1872, to wit, on orders not exceeding \$20 ten cents, on orders above \$20 and not over \$30 fifteen cents, over \$30 and not over \$40 twenty cents, and over \$40, but not exceeding \$50, twenty-five cents. The gross revenue amounted to \$362,888.02, but the expenses paid from appropriations were \$369,341.60, showing a net loss of \$6,453.58.

During the three years ended June 30, 1875, the business was transacted upon the basis of the fees established by the act of June 8, 1872, which were as follows: For orders not exceeding \$10 five cents, over \$10 and not over \$20 ten cents, over \$20 and not over \$30 fifteen cents, over \$30 and not over \$40 twenty cents, over \$40 and not over \$50 twenty-five cents. The gross revenue amounted to \$293,924.21, but the actual net loss, including expenses paid from appropriations, was \$241,561.54. To prevent a continuance of such loss from the business the fee for small orders was increased by the act of March 3, 1875. The new schedule, which is still in force, is as follows: For orders not exceeding \$15 ten cents, over \$15 and not over \$30 fifteen cents, over

\$30 and not over \$40 twenty cents, and over \$40 but not exceeding \$50, the maximum amount of an order, twenty-five cents. The gross revenue from July 1, 1875, to June 30, 1880, under the operation of this schedule, was \$975,190.25, the amount paid out of appropriations was \$945,744.54, showing a net gain during that period of \$29,445.71. This is assuredly a very moderate profit from the transaction of a business which increased from \$77,035,972.78, in the fiscal year 1876, to \$100,352,818.83 during the last fiscal year.

Since the withdrawal of the fractional currency from circulation and the substitution therefor of silver coin, which cannot be conveniently, or with moderate safety, transmitted by mail in ordinary letters, it has been urged that the present fee of ten cents on orders not exceeding \$15, and particularly on those not exceeding \$5, is too high and ought to be reduced in the interest of public convenience. Some measure of this nature looking to a diminution of the charge for transferring small sums by mail has been strenuously advocated by publishers of newspapers and other business men who frequently receive small remittances. There are two ways in which this charge can be lessened without causing direct loss to the department. One is an extension of the maximum amount for which an order can be issued, from \$50 to \$100, with an increase of the fee for each additional amount of \$10 in excess of \$50, and a reduction of the fee for orders not exceeding \$10, together with a slight decrease in the commissions allowed to postmasters for the issue and payment of orders. The present form of order and advice is to be retained, but the registers of orders issued and of advices received, which postmasters are now required to keep, are to be discontinued, whereby the amount of clerical labor at money-order offices would be materially lessened. By these modifications not only would the cost to the department of transacting the money-order business be diminished, but as the expense incurred in the issue and payment of small and large orders is the same, it is believed that the gain from the increased fees for the larger orders would counterbalance the loss incurred by the diminution of the fees for small orders. Within the last two years, the experiment of dispensing wholly or partially with registers has been tried at a few large post-offices, and it has caused no difficulty of moment in the transaction of money-order business.

In Great Britain postmasters receive a commission of one penny, equal to about two cents, for each order issued and for each order paid by them. The compensation now given to postmasters in this country averages a little more than  $3\frac{7}{10}$  cents for each order issued, paid, or repaid, and for each certificate of deposit made out and sent to remitting postmasters. I respectfully suggest that the compensation of postmasters be reduced to three cents for each of these transactions. It is estimated that with this rate of compensation to postmasters, together with the amount paid for salaries of employes in the Money-Order branch of this department and of the Auditor's office, and for books, blanks, stationery, &c., the total average cost of each transaction would be  $5\frac{315}{1000}$  cents. The entire cost of the domestic money-order business upon this basis during the last fiscal year would have been \$794,631.29. The actual expenses of the business under the existing rates of commission amounted to \$822,284.87. A table exhibiting in detail the estimated cost of each transaction upon the basis of compensation above proposed will be found herewith marked "A."

For the purpose of obtaining data upon which an estimate might be based of the ratio of the number of small orders issued to that of large orders, a special record was kept at ten of the principal post-offices in

the United States, showing the number of orders paid at each during the week ended September 18, 1880, of the following six classes, viz: Orders not exceeding \$5, over \$5 and not exceeding \$10, over \$10 and not exceeding \$20, over \$20 and not exceeding \$30, over \$30 and not exceeding \$40, over \$40 and not exceeding \$50. Five of these are Northern offices, viz: New York, Chicago, Philadelphia, Cincinnati, and Boston; and five Southern, viz: Saint Louis, Louisville, Baltimore, New Orleans, and Washington. A tabular statement of these records marked "B" is hereto appended. This table shows that out of every 1,000 orders paid in the Northern cities 498 were for sums not exceeding \$5, 196 for sums over \$5 and not exceeding \$10, and but 42 for sums over \$40. In the Southern cities the proportion of orders paid not exceeding \$5 was 333 in 1,000; of orders exceeding \$5 and not exceeding \$10 it was 193, and of orders exceeding \$40, 129. The larger proportion of small orders paid in the Northern cities is probably owing to a more general demand for such orders by remitters for the payment of insurance premiums, subscriptions to newspapers, magazines, &c., and for the purchase of mailable articles of small value at these centers of trade. It appears, furthermore, that at the ten offices in question 654 paid orders in every 1,000 were for sums not exceeding \$10. On the other hand, an examination of the weekly returns of twenty small offices of the third class, ten Northern and ten Southern, for one week in September, 1880, shows that only 433 of 1,000 orders paid by them were for sums not exceeding \$10. This fact would tend to lessen an estimate of the number of small orders issued throughout the whole country. There is another important circumstance, however, which is to be considered in making such estimate, and that is the steady decrease from year to year of the average amount for which a money-order is issued. During the fiscal year 1874 it was \$16.83, while during the last fiscal year it was only \$13.86. Moreover, a reduction of the fee for orders not exceeding \$10 would tend to increase considerably the sale of such orders. A tabular statement is herewith submitted, giving an estimate of the proportion in 1,000 of each class of orders described therein which would be issued under a schedule of fees (commencing with 5 cents for an order not exceeding \$5), whereof the rate per cent. on the maximum amount of each class diminishes as those amounts increase up to the limit of \$100.

Class of orders.	Estimated number in 1,000.	Scale of fees.	Accruing gross revenue.	Percentage on maximum amount in each class.
		<i>Cents.</i>		
Not exceeding \$5 .....	500	5	\$25 00	1 per cent.
Exceeding \$5 and not exceeding \$10.....	170	8	13 60	0.8 per cent.
Exceeding \$10 and not exceeding \$15.....	50	11	5 50	0.733 per cent.
Exceeding \$15 and not exceeding \$20.....	50	13	6 50	0.650 per cent.
Exceeding \$20 and not exceeding \$25.....	30	15	4 50	0.6 per cent.
Exceeding \$25 and not exceeding \$30.....	20	17	3 40	0.567 per cent.
Exceeding \$30 and not exceeding \$35.....	10	19	1 90	0.543 per cent.
Exceeding \$35 and not exceeding \$40.....	10	21	2 10	0.525 per cent.
Exceeding \$40 and not exceeding \$45.....	10	23	2 30	0.511 per cent.
Exceeding \$45 and not exceeding \$50.....	20	25	5 00	0.5 per cent.
Exceeding \$50 and not exceeding \$60.....	20	29	5 80	0.483 per cent.
Exceeding \$60 and not exceeding \$70.....	20	33	6 60	0.471 per cent.
Exceeding \$70 and not exceeding \$80.....	20	37	7 40	0.463 per cent.
Exceeding \$80 and not exceeding \$90.....	30	41	12 30	0.456 per cent.
Exceeding \$90 and not exceeding \$100.....	40	45	18 00	0.45 per cent.
Totals.....	1,000	.....	119 90	



The object in the proposed decrease in the rate per cent. of the fee as the orders increase is to promote the sale of the larger orders from which alone the department would derive any profit.

The average fee of  $11\frac{99}{100}$  cents resulting from the modifications indicated in this table is  $1\frac{36}{100}$  cents in excess of the estimated average cost of the issue and payment of an order, namely,  $10\frac{63}{100}$  cents, provided the compensation of the postmaster be fixed at three cents for each of these transactions, as above suggested. (See table "A.")

It is believed that this average surplus of  $1\frac{36}{100}$  cents is sufficiently large to cover any diminution of receipts that might be caused by deviations from the estimated ratio of orders of each class, and to provide for the cost of clerical labor required in issuing certificates of deposit to remitting postmasters. A slight modification might be made, if deemed desirable, in this schedule by fixing the fees for the larger orders at  $\frac{1}{2}$  of one per cent. on the several divisions of the scale from \$50 to \$90, without increasing the fee for orders exceeding \$90. This arrangement would make the fee for an order of \$50 twenty-five cents; for an order over \$50 and not over \$60 thirty cents; over \$60 and not over \$70 thirty-five cents; over \$70 and not over \$80 forty cents; over \$80 up to \$100 forty-five cents. Such a scale of fees increasing regularly by five cents would be convenient for postmasters, as well as for the public, in the transaction of money-order business.

The second mode, by which the charge to the public for the transfer of small sums through the mails can be lessened, is the adoption of some plan that will dispense with the advice, which is a great element of expense. The various devices proposed for this purpose may all be classed under three heads, to wit: 1st, notes for fixed sums, printed or engraved thereon, issued by the Post-Office Department and payable to the bearer at any money-order office; 2d, postage-stamps of the several denominations pasted on sheets of paper or cardboard and sold to the remitter by the Post-Office Department, in such sums as he may require, the amount to be payable to the holder at a designated post-office; 3d, the issue of money-orders, without advice, for any sum written thereon within a fixed limit, payable during a certain period at any money-order office and capable of being transferred from one person to another, like a check drawn to order.

These three plans were carefully considered, and the opinions of experienced officers of the British post-office in regard to them were obtained in 1876, by a committee of inquiry appointed by the lords commissioners of the treasury. The report of this committee, which was ordered by the House of Commons to be printed in 1877, contains much interesting and valuable information upon this subject. It appears from the testimony of post-office experts, as well as from the opinions expressed by the committee, that although the advice adds largely to the cost of the order, erroneous and fraudulent payment cannot be prevented without it, and that it is a safeguard against the alteration of the amount, as well as counterfeiting of the order. These are the three principal dangers to which any document employed to transfer money by mail is exposed. Complete protection against them is at present assured to remitters and payees of money-orders in the United States.

The scheme of postal notes for certain fixed sums was proposed by Mr. Chetwynd, receiver and accountant general of the British post-office, and obtained the preference of the committee, who stated, however, that they "have had some hesitation in arriving at a definite opinion on the scheme of postal notes proposed by Mr. Chetwynd, because officers of great practical experience have insisted, with much show of reason, not



only that the postal note, as a remitting medium, would be less secure than the money-order, but that if it should come largely into circulation it would tend to increase letter stealing and to the consequent demoralization of the post-office servants." This scheme, with slight modifications, has received the sanction of Parliament, and it is understood that it will soon go into operation. It presents the following salient features:

- 1st. Circular notes of four different fixed denominations, to wit:  
2 shillings 6 pence, equal to 61 cents; fee 1 penny, equal to 2 cents.  
5 shillings 0 pence, equal to \$1.22; fee 1 penny, equal to 2 cents.  
10 shillings 0 pence, equal to \$2.44; fee 2 pence, equal to 4 cents.  
15 shillings 0 pence, equal to \$3.66; fee 2 pence, equal to 4 cents.
- 2d. No written application is required from the purchaser.
- 3d. No advice is sent by the issuing to the paying postmaster.
- 4th. Payment is made at any money-order office at the option of the holder.
- 5th. No records of details of notes are to be kept by postmasters.
- 6th. When the exact sum required cannot be remitted by postal notes, the deficiency is to be supplied by postage-stamps, to be inclosed with the note in the remitter's letter.
- 7th. The name of the payee may be left blank, so as to make the note payable to bearer.
- 8th. The note is to become void if unpaid six months after date, but "the Postmaster-General may, in special circumstances, on application, authorize the amount of the note to be paid, subject to double the original fee."
- 9th. A duplicate of a lost note cannot be granted under any circumstances.

This plan offers the following advantages to the public, to wit:

1. Its cheapness.
2. The facility and rapidity with which the notes may be procured and paid, inasmuch as they may be made by the holder payable at any money-order office without the intervention of a postmaster.
3. They may be used in blank, payable to bearer, or may by the holder be made payable to a designated person.

On the other hand, the disadvantages to the public would be—

1st. A duplicate could not be issued of a postal note lost in the mail, because payment of the original note could not be stopped, as it would be payable at any post-office which the holder might select, and because the ownership of the lost note could not well be established, as there would be no record at the issuing office of the name of the remitter or payee. In such cases the loss of the owner would be as complete as if the lost note were United States fractional currency. Indeed, the latter was quite as safe and convenient for transmission by mail as the postal note, and, furthermore, possessed this special advantage, that the sender paid no fee for it. The advocates of postal notes point out that they are not intended to take the place of money-orders, but are to be issued concurrently with them, and that a remitter, who desires to avoid the risk of loss in sending a postal note by mail, can always obtain a money-order for a like amount by paying a little higher fee. But I venture to question the expediency of any scheme for the issue of postal orders or notes in this country which does not provide for the refunding of the amount of an order lost in the mails. Such a scheme would cause hardship to poor people, who form a large proportion of remitters of small sums, and would inevitably cause great complaint from them, as well as from publishers of newspapers who might fail to receive subscriptions

sent by postal notes, and also from dealers in mailable articles of small value, who are accustomed to receive large numbers of small money-orders. It would be claimed that the postal notes were lost through the fault of the department which issued them, and ought therefore to be made good to the loser. The failure to provide for duplicates of lost orders is a serious objection to all plans heretofore proposed for postal notes, or similar devices for the transfer of small sums by mail.

2d. Inconvenience to the remitter from his inability to pay any required amount by postal notes without the use at the same time of postage-stamps.

3d. Hardship caused by the forfeiture of a note if not presented for payment within six months from the date of issue, unless the Postmaster-General in special cases authorizes payment to be made, subject to a charge of double the original fee.

4th. Payment of lost or stolen postal notes could readily be obtained and the proper payee would have no redress, as when payment of a postal note has once been made the Post-Office Department is to be free from any further liability therefor.

5th. The public would be exposed to loss from counterfeits of postal notes, payable to bearer, which would circulate largely as currency. Small dealers in sparsely-settled districts and poor and inexperienced people would suffer in this way.

The issue of postal notes would also occasion certain disadvantages to the Post-Office Department:

1st. The very large number of these notes that would be sent by mail would offer to employes in post-offices temptation to theft, and thereby tend to demoralize the service. It is well known that the department has for many years steadily discouraged the practice of inclosing money in ordinary letters as dangerous to the security of the mails.

2d. The absence of an advice would expose the postmaster to the danger of loss from the payment of counterfeit postal notes, even if the genuine notes were as well engraved as ordinary bank notes. The counterfeiter or his confederates could easily select offices of payment at which the postmasters would not be competent to detect even an inferior counterfeit. In certain sections of the country extensive frauds of this kind could be perpetrated by criminals who could readily escape to adjacent foreign countries in order to avoid punishment.

3d. Postmasters at small offices, especially those engaged in trade, would be tempted to use for their own private purposes postal notes placed in their custody for sale. They could easily put these notes into circulation, as they would remain current for six months before they became invalid, if not paid. In the mean time the issuing postmaster would claim in his accounts that they were still on hand. This fraud could only be detected by frequent examination of his office by an inspector, which would not be practicable, particularly in remote localities.

4th. The proposal that the amount of the postal note should be forfeited if not presented within six months from the date of issue, could not be carried out in practice in the United States, and would give great trouble to the department. The public would demand that a postal note for which the amount on its face had been paid to the government should be redeemed, no matter when presented. If postal notes, payable to bearer, were found convenient as currency, they would circulate like bank notes and might not be presented for payment for some years after their date. In this way, post-offices would become banks of issue for small notes. There would be no effectual mode of compelling holders to present these notes for payment before the expiration of the designated period, for the reason that they would be confident that the United States would pay them eventually.

5th. The absence of an advice would deprive the postmaster of information as to the amount of funds required by him to meet postal notes on presentation. He now retains, for the payment of money-orders, a sum equal to the amount of his unpaid advices two weeks on hand. Postal notes in large amounts in the aggregate could be presented, without notice, at small money-order offices, in remote parts of the country, where the postmasters would not have funds on hand to meet them, and considerable time might elapse before funds could be obtained from the department.

6th. Post-offices would be liable to robbery by burglars trying to get possession of the postal notes kept for sale by postmasters. They are frequently robbed at present for the sake of small amounts of money and postage-stamps. For a like reason packages of books of postal notes, sent by mail to frontier offices as post-office supplies, would be subject to great danger in transit.

As before stated, they could be readily used as currency by those into whose hands they might come.

After careful consideration of the advantages of Mr. Chetwynd's scheme of postal notes, I am led to the conclusion that the interests of the public and of the department would be better served by the retention of the present form of money-order and advice and the adoption of the schedule of fees which I have proposed above, under which the fee for an order not exceeding five dollars would be reduced from ten to five cents, and the maximum amount of the order would be extended from \$50 to \$100. The fee for a postal note of ten shillings, equal to \$2.44, or of fifteen shillings, equal to \$3.66, would be a little more than four cents, while the fee for a money order for either of those amounts, or for a larger amount up to \$5, would be five cents. But for this small difference between the fees the public would, in my opinion, receive abundant compensation in the absolute security which the money-order affords.

The second plan for the transfer of small sums through the mails, which came before the committee, was that originally proposed by Mr. Scott, formerly of the Edinburgh post-office. It was to paste postage-stamps of various denominations on sheets of paper, prepared for the purpose and sold by the Post-Office Department. A report condemning this plan was made by Mr. Scudamore, of the British post-office, in 1866, and the plan found no favor with the committee. A similar scheme has been proposed several times in this country, the main feature of which is the pasting of postage-stamps on the back of a postal card to be sold by the department. While these devices are open to the same objection as Mr. Chetwynd's, that a duplicate could not be issued in case of loss, yet they are superior to his in this respect, that they could be issued for any sum, up to a limited amount; but they have these disadvantages, namely, dishonest persons could remove uncanceled stamps from the cards and replace them with "washed stamps" that had been used in payment of postage, and thieves could remove and sell the stamps and destroy the cards. The computation by the postmaster of the number of stamps of the various denominations to be used to make up a required amount, and the time consumed by him in pasting the stamps on the card, would tend to make the issue of card orders of this description an awkward and tedious process, quite unsatisfactory to the public.

The third plan to provide a mode of cheap transfers of small sums by mail was submitted to the committee by Mr. Beaumont, postmaster at Manchester, England. It is thus described by him:

The plan is to issue money-orders without advices for small sums, payable at any money-order office in the kingdom only, not later than two months from the date of

issue, and capable of being transferred in the mean time from one person to another, in the same way as a check drawn to order.

The manifest objections to these orders, in which the amounts would be simply filled in with a pen, are the facility with which counterfeits could be circulated and alterations of amounts made in genuine orders. In the latter case the paying postmaster would have no advice to inform him as to the amount actually paid for the order. This plan was rejected by the committee.

A form of postal money-order card or note has recently been submitted by Inspector Harrison, of the money-order service of this department, which is a great improvement upon Mr. Beaufort's plan, and is, in my judgment, the best scheme of the kind that has yet been devised. The peculiar feature of this plan is the effectual prevention of alteration of the written amount of the order by a series of nine numbers printed on its face, doubling consecutively from one cent to two dollars and fifty-six cents. The issuing postmaster is to punch out with a "conductor's punch" all the numbers except those required to make up the amount of the order. Any sum can be left upon the order from one cent to \$5.11, which represents its value when all the numbers remain intact. A similar device to prevent or to impede the alteration of bank drafts has been in use for many years. The name of the payee and of the paying and the issuing postmaster is to be written on the card order by the latter, who must also write thereon the amount and stamp the date of issue. The card order is to be provided with a stub upon which is to be recorded the name of the remitter, and of the payee, and the amount, and it must bear the same number and stamped date as the order. The stub is to be the sole record of the order at the issuing office. These money-order cards are to become invalid if not paid within three months after the date of issue, but duplicates, for which an additional fee is to be charged, can be obtained upon application to the department and the surrender of the original, or, if it be lost, upon proof of ownership and the filing of a certificate from the paying postmaster that the original had not been paid, and of one from the issuing postmaster that it had not been repaid. For this purpose the paying postmaster would be obliged to keep a register of card orders paid, because he would not have an advice to which he could refer. These postal-card orders, if engraved, for protection against counterfeiting, could not be issued to the public for a fee of less than four cents. The compensation to postmasters would be one cent for issuing and one cent for paying them. One cent would be required to meet the expenses of supervision and auditing and for miscellaneous items, and one cent for the cost of manufacture and distribution.

This plan is free from the most of the objectionable features that have been pointed out in other schemes for the transfer by mail of small sums at cheap rates. It possesses, moreover, two marked advantages, a provision for furnishing duplicates of lost orders, and a complete safeguard against alteration of the amount. On the other hand, it is much more exposed to the danger of fraudulent payment than the present money-order. The paying postmaster would not have an advice giving him information not contained in the order as to the name and address of the remitter, which would enable him, by questioning the applicant, to determine whether the latter is the person entitled to payment. For this reason, each order lost or stolen after their issue could be used to obtain money, without much difficulty, especially if the notes were indorsed in blank. If they had been lost before issue, as in the case of a



book of such orders stolen while in transit from the department to a postmaster, payment could be procured before the department had been informed of the loss.

If the plan in question were adopted, large numbers of card orders would doubtless be issued. They would probably be counterfeited just as fractional currency and national-bank notes have been counterfeited. Postmasters would be liable to losses from the payment of such counterfeits, for the reason that they would be deprived of the protection of an advice, which passes in a sealed envelope in the mails from the issuing to the paying postmaster, and is never in the possession of a remitter, payee, or other person not employed in a post-office, so that it cannot be tampered with or a counterfeit thereof used, except through collusion between a postmaster and some fraudulent person outside his office. While this plan does away with the inconvenience of four fixed denominations for postal notes, as proposed by Mr. Chetwynd, and at the same time prevents the alteration of amounts, yet it would exact much more work from post-office employes. The officer who issues a postal-card order must write upon it the name and State of the paying office, the name of the payee, the amount, and his own signature, and place thereon the impression of his office stamp. He must then calculate what printed numbers are necessary to make up the amount of the order applied for, and must punch out the residue. He must also enter upon the corresponding stub the name of the remitter and of the payee, the office of payment, and the amount, and stamp the date thereon. In lieu of the stub, a written application from the remitter might be used, containing these particulars. Such an application, which would be numbered, stamped, and filed by the postmaster, would somewhat lessen his work. But the computation and punching required in dealing with the printed numbers would in most cases prove slow processes, so that nearly as much time would be consumed in the issue of a postal-card order as of a money-order. It is questionable whether a commission of one cent on each card order issued would be found in practice sufficient to pay for the requisite clerical labor. A serious difficulty in the working of this plan would arise from the liability to frequent mistakes in the punching out of the numbers; this would produce a discrepancy between the written amount and the total of the printed numbers remaining intact, which would often escape the notice of the remitter. In such cases the postmaster at the office drawn upon would be compelled to refuse payment, thereby causing delay and hardship to the payee because of a mistake made by the issuing postmaster.

In conclusion, I beg to express the opinion that the transfer of small sums by mail, at comparatively cheap rates, can be effected with less risk of loss to the public and to the department by the money-order and advice, now in use, than by any postal-note device that has yet been proposed. I respectfully recommend the reduction of the fee for orders not exceeding \$5 from ten cents to five cents, and for orders over \$5, but not over \$10, from ten cents to eight cents, and an extension of the maximum limit of an order from \$50 to \$100, so that the increased commissions received for large orders may offset the loss resulting from the reduced fees for small orders. The details of the changes here suggested in the fees and in the amounts for which money-orders may be drawn are exhibited in the schedule given above.

I venture to add that it is not improbable that an experience of the operation of the schedule in question for a comparatively brief period



would show that the fee for money-orders not exceeding \$5 might, with safety, be further reduced to four cents.

I have the honor to be, sir, your obedient servant,

C. F. MACDONALD,  
*Superintendent, Money-Order System.*

Hon. HORACE MAYNARD,  
*Postmaster-General.*

Estimated cost of issuing, paying, or repaying a money-order, or of issuing a certificate of deposit, under a law which would require that postmasters' compensation be paid according to the work performed, i. e., by the transaction.

	Cents
Postmasters' compensation for each order issued, paid, or repaid, or for each certificate of deposit issued .....	.03
Average expense, per transaction, on account of erroneous payments, lost remittances, bad debts, &c. ....	.00 <sup>25</sup> / <sub>1000</sub>
Ditto on account of miscellaneous and incidental expenses.....	.00 <sup>27</sup> / <sub>1000</sub>
Total payable from the proceeds of the business .....	.03 <sup>52</sup> / <sub>1000</sub>
Average expense, per transaction, on account of clerks in the superintendent's office .....	.00 <sup>31</sup> / <sub>1000</sub>
Ditto for books, blanks, printing, and stationery for ditto .....	.00 <sup>32</sup> / <sub>1000</sub>
Ditto for clerks in Sixth Auditor's Office.....	.00 <sup>23</sup> / <sub>1000</sub>
Ditto for books, blanks, printing, and stationery for ditto.....	.00 <sup>21</sup> / <sub>1000</sub>
Total payable from appropriations .....	.01 <sup>88</sup> / <sub>1000</sub>
Total estimated cost of each transaction.....	.05 <sup>11</sup> / <sub>1000</sub>

At the above rates the cost of transacting the domestic money-order business, during the last fiscal year, would have been as follows:

For 7,240,537 money-orders issued, at 5 <sup>31</sup> / <sub>1000</sub> cents .....	\$384, 834 54
For 7,213,607 money-orders paid, at 5 <sup>31</sup> / <sub>1000</sub> cents.....	383, 403 21
For 46,845 money-orders repaid, at 5 <sup>31</sup> / <sub>1000</sub> cents.....	2, 489 81
For 449,741 certificates of deposit, at 5 <sup>31</sup> / <sub>1000</sub> cents.....	23, 903 73
Total expenses of the business.....	794, 631 29

The actual expenses, under the existing rates of commissions to postmasters, were \$822,284.87.

REPORT OF THE AUDITOR OF THE POST-OFFICE DEPARTMENT.

OFFICE OF THE AUDITOR OF THE TREASURY,  
FOR THE POST-OFFICE DEPARTMENT,  
November 6, 1880.

SIR: I have the honor to submit the following annual report of the receipts and expenditures of the Post-Office Department, together with the operations of this office in connection therewith, for the fiscal year ended June 30, 1880.

COLLECTION OF POST-OFFICE REVENUES.

The number of post-offices in operation during the year was 43,060, which are classified, under the regulations adopted for the government

of the department, chapter 2, section 76, as follows: Special offices, depositing offices, depository and draft offices, and collection offices.

The following named offices are denominated depositories or draft offices, and are required by the Postmaster-General to receive and retain, subject to the drafts of the department, the funds of certain adjacent offices, as well as the revenues of their own, viz:

Albany, N. Y., W. H. Craig.  
 Atlanta, Ga., Benj. Conley.  
 Auburn, N. Y., N. P. Clark.  
 Augusta, Me., H. H. Hamlin.  
 Austin, Tex., H. B. Kinney.  
 Bangor, Me., A. B. Farnham.  
 Binghamton, N. Y., E. B. Stephens.  
 Boise City, Idaho, John A. Post.  
 Charleston, S. C., B. A. Roseman.  
 Cheyenne, Wyo., Susan R. Johnson.  
 Cleveland, Ohio, N. B. Sherwin.  
 Concord, N. H., L. H. Carroll.  
 Council Bluffs, Iowa, Jane Baldwin.  
 Columbus, Ohio, A. D. Rodgers.  
 Denver, Colo., W. N. Byers.  
 Des Moines, Iowa, John Beckwith.  
 Detroit, Mich., G. C. Codd.  
 Dubuque, Iowa, G. L. Torbert.  
 Elmira, N. Y., D. F. Pickering.  
 Evansville, Ind., F. M. Thayer.  
 Fort Wayne, Ind., F. W. Keil.  
 Grand Rapids, Mich., J. Gallup.  
 Harrisburg, Pa., M. W. McAlarney.  
 Hartford, Conn., J. H. Burnham.  
 Helena, Mont., S. H. Crounse.  
 Houghton, Mich., F. A. Douglass.  
 Houston, Tex., J. Richardson.  
 Iowa City, Iowa, Jacob Ricord.  
 Indianapolis, Ind., W. R. Holloway.  
 Jackson, Miss., W. H. H. Green.  
 Jacksonville, Fla., Hamilton Jay.  
 Jamestown, N. Y., A. B. Fletcher.  
 Kalamazoo, Mich., L. B. Kendall.  
 Keokuk, Iowa, S. M. Clark.  
 Knoxville, Tenn., William Rule.  
 Lansing, Mich., S. D. Bingham.  
 Leavenworth, Kans., D. R. Anthony.  
 Lexington, Ky., H. K. Milward.  
 Lima, Ohio, Geo. P. Waldorf.  
 Little Rock, Ark., O. A. Hadley.  
 Louisville, Ky., V. C. Thompson.  
 Madison, Wis., E. W. Keyes.  
 Meadville, Pa., J. F. Morris.  
 Memphis, Tenn., A. D. H. Thompson.

Milwaukee, Wis., H. C. Payne.  
 Mobile, Ala., M. D. Wickersham.  
 Montgomery, Ala., J. W. Roberts.  
 Montpelier, Vt., J. W. Clark.  
 Nashville, Tenn., W. P. Jones.  
 Newark, N. J., W. Ward.  
 New Bedford, Mass., T. Coggeshall.  
 New Haven, Conn., N. D. Sperry.  
 Ogdensburgh, N. Y., R. G. Pettibone.  
 Olean, N. Y., M. B. Fobes.  
 Olympia, Wash., James N. Gale.  
 Omaha, Nebr., T. F. Hall.  
 Peoria, Ill., W. Cockle.  
 Pittsburgh, Pa., Geo. H. Anderson.  
 Plattsburgh, N. Y., H. S. Ransom.  
 Portland, Me., C. W. Goddard.  
 Portland, Oreg., George E. Cole.  
 Portsmouth, N. H., E. G. Pierce.  
 Providence, R. I., H. W. Gardner.  
 Raleigh, N. C., W. W. Holden.  
 Richmond, Va., G. K. Gilmer.  
 Rochester, N. Y., D. T. Hunt.  
 Rutland, Vt., A. H. Tuttle.  
 Saint Albans, Vt., B. D. Hopkins.  
 Saint Johnsbury, Vt., C. P. Carpenter,  
 (2d).  
 Saint Paul, Minn., David Day.  
 Salt Lake City, Utah, J. T. Lynch.  
 Santa Fé, N. Mex., M. A. Breedon.  
 Savannah, Ga., L. McLaws.  
 Scranton, Pa., J. A. Scranton.  
 Springfield, Ill., Paul Selby.  
 Springfield, Mass., H. C. Lee.  
 Taunton, Mass., E. E. Fuller.  
 Terre Haute, Ind., N. Filbeck.  
 Towanda, Pa., P. Powell.  
 Utica, N. Y., E. Clark.  
 Wheeling, W. Va., Hugh Sterling.  
 Williamsport, Pa., R. Hawley.  
 Winona, Minn., D. Sinclair.  
 Worcester, Mass., J. Pickett.  
 Yankton, Dak., A. W. Howard.  
 Zanesville, Ohio, W. S. Harlan.

The following officers receive and retain, subject to the warrants of the Post-Office Department, the funds of such post-offices as are instructed to deposit in their hands, viz:

The Treasurer of the United States at Washington, D. C.

The assistant treasurer of the United States at—

New York, N. Y.  
 Baltimore, Md.  
 New Orleans, La.

Cincinnati, Ohio.  
 Saint Louis, Mo.  
 Philadelphia, Pa.

Boston, Mass.  
 Chicago, Ill.  
 San Francisco, Cal.

Eighty-six post-offices are draft-offices, and during the year paid 27,146 drafts, issued by the Postmaster-General, countersigned, entered, and

sent out by the Auditor, for sums in the aggregate of ..... \$2,873,335 63

Thirteen thousand seven hundred and forty-five are deposit offices, a portion of which during the year deposited with the Treasurer and assistant treasurers of the United States the sum of.....

6,857,652 44

Twenty-eight thousand and fifty-three are collection offices, and paid on collection orders issued to mail contractors the sum of .....	\$5, 439, 026 30
One thousand nine hundred and fifty-eight are special offices, and derive their mail supplies by the payment of their revenues therefor, amounting to .....	38, 540 18
Four thousand eight hundred and forty-three post-offices are supplied by mail messengers, for which service there was paid during the year .....	671, 588 38

## REVENUE ACCOUNT OF THE POST-OFFICE DEPARTMENT.

The revenue of the department for the fiscal year ended June 30, 1880, was .....	\$33, 315, 479 34
The amount placed in the Treasury for the service of the department for the fiscal year, being grants in aid of the revenues, under the second section of the act approved March 3, 1879 (Statutes, vol. 20, page 352), was .....	3, 500, 000 00
Aggregate of revenue and grants .....	36, 815, 479 34
The expenditures for the fiscal year 1880 were.....	36, 101, 820 38
Excess of receipts.....	713, 658 96
The amount of balances, due postmasters, credited to "suspense" account was .....	\$8, 126 27
The amount of balances, due by postmasters, charged to "bad debts" and "compromise" accounts, was.....	2, 755 41
	5, 370 86
Balance available for service of 1880 .....	719, 029 82
The balance available for the service of 1879, as per last annual report, was .....	31, 528 63
The amount paid on that account during the last fiscal year was.....	259, 873 07
Deficiency, provided for by appropriation in aid of the revenues of 1879, act of June 14, 1878 .....	228, 344 44
The balance available for the service of 1878, as per last annual report, was .....	182, 266 97
The amount paid on that account during the last fiscal year was .....	94, 284 33
Balance no longer available, and to be covered into the Treasury.	87, 982 64
By the act approved June 16, 1880 (deficiency), was appropriated for the service of 1877 and prior years .....	97, 717 20
The amount paid on that account during the last fiscal year was .....	86, 825 90
Balance available for that service .....	10, 891 30

## SUMMARY OF REVENUES AND EXPENDITURES.

Revenue of 1880.....	33, 315, 479 34
Grants from Treasury, 1880.....	\$3, 500, 000 00
Grants from Treasury, 1877 and prior years.....	97, 717 20
	3, 597, 717 20
Total receipts.....	36, 913, 196 54
Expenditures for 1880 .....	\$36, 101, 820 38
Expenditures for 1879 .....	259, 873 07
Expenditures for 1878 .....	94, 284 33
Expenditures for 1877 and prior years .....	86, 825 90
Total expenditures .....	36, 542, 803 68
	370, 392 86
Net amount credited to suspense account during fiscal year .....	5, 370 86
Excess of receipts .....	375, 763 72

The balance standing to the credit of the general revenue account at the close of the fiscal year ended June 30, 1879, was .....	\$3, 128, 088 39
Excess of receipts during last fiscal year .....	375, 763 72

Balance to the credit of the revenue account at close of fiscal year ended June 30, 1880 .....		\$3, 503, 852 11
Due by late postmasters {	accounts in suit .....	\$246, 250 39
	accounts not in suit .....	178, 386 91
		<hr/> 424, 637 30
		<hr/> 3, 079, 214 81

### GENERAL DEFICIENCY APPROPRIATION.

The amount appropriated from the general Treasury to supply deficiencies in the revenue of the Post-Office Department for the fiscal year 1880, by the act of March 3, 1879, was.....	\$5, 457, 376 10
The amount thereof placed to the credit of the Post-Office Department during the fiscal year, being "grants from the Treasury," was .....	3, 500, 000 00
	<hr/>
Balance remaining in the general Treasury, subject to requisitions should deficiencies for 1880 accrue.....	1, 957, 376 10

The revenues of the department from postages, being the aggregate of balances due the United States by postmasters on the adjustment of their quarterly accounts for the fiscal year, after deducting their compensation and the expenses of their offices, was :

For the quarter ended September 30, 1879 .....	\$4, 743, 034 08
For the quarter ended December 31, 1879 .....	5, 400, 421 00
For the quarter ended March 31, 1880 .....	5, 752, 293 70
For the quarter ended June 30, 1880 .....	5, 167, 387 38
<b>Total .....</b>	<b>21, 063, 136 16</b>

**The amount of stamps, stamped envelopes and wrappers, newspaper and periodical stamps, and postal cards sold was :**

For the quarter ended September 30, 1879 .....	\$7, 226, 352 06
For the quarter ended December 31, 1879 .....	7, 986, 433 52
For the quarter ended March 31, 1880 .....	8, 476, 072 23
For the quarter ended June 30, 1880 .....	7, 805, 262 34
Total .....	<u>31, 494, 120 15</u>

The amount of official stamps furnished the different departments included in the above amount of stamps sold was:

For the War Department .....	\$96,177 22
For the Navy Department .....	890 00
For the Interior Department.....	14,437 50
For the Department of Agriculture.....	30 00
<b>Total .....</b>	<b>111,534 72</b>

**The number of quarterly returns of postmasters received and audited, on which the sum of \$21,063,136.16 was found due the United States, was:**

For the quarter ended September 30, 1879 .....	40,727
For the quarter ended December 31, 1879 .....	41,488
For the quarter ended March 31, 1880 .....	41,902
For the quarter ended June 30, 1880 .....	42,311
Total .....	<u>166,428</u>

## MAIL TRANSPORTATION.

The amount charged to "transportation accrued" and placed to the credit of mail contractors and others, for mail transportation, during the fiscal year, was :

For the regular supply of mail routes .....	\$18,530,593 06
For the supply of "special" offices.....	38,540 18
For the supply of "mail messenger" offices.....	671,468 77
For the salaries of postal-railway clerks, route and other agents .....	2,778,645 47
For the salaries and expenses of the assistant superintendents of the postal-railway service .....	37,432 85
<b>Total.....</b>	<b>22,056,680 33</b>

## Foreign mail transportation :

New York, Great Britain and Ireland, and countries beyond, via Great Britain .....	\$117,449 00
New York, Great Britain and Ireland, and Germany, and countries beyond .....	44,455 20
Philadelphia, Great Britain and Ireland .....	1,964 28
Boston, Great Britain and Ireland .....	1,227 69
Post-Office Department of Canada, English mail...	614 54
New York, Baltimore, Philadelphia, Boston, Key West, New Orleans, and San Francisco, West Indies, Central and South America, Mexico, &c....	29,615 88
New York and Newfoundland.....	81 90
Boston and Nova Scotia .....	240 11
Baltimore and Bremen .....	5 75
Cleveland, Ohio, and Port Stanley, Canada .....	64 90
Upper Pacific coast local mails.....	796 87
San Francisco, China, Japan, Farther India, Australia, and South Sea Islands.....	13,363 30
Expenses of government mail agent at Aspinwall..	940 00
Expenses of government mail agent at Panama....	1,513 15
Expenses of government mail agent at Shanghai, China .....	1,197 81
	<b>213,530 38</b>

22,270,210 71

The amount credited to transportation accrued and charged to contractors for overcredits for "fines and deductions" was...	332,029 13
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Net amount to the credit of mail contractors .....	21,938,181 58
The amount paid during the year was .....	21,074,282 14

Excess of "transportation accrued" .....	863,899 44
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The following balances, accrued for transportation of the mails on railroads, have been certified to the Register of the Treasury, to be carried to the credit of the companies named, under act of March 3, 1879, and instructions contained in the letter of the Secretary of the Treasury of May 19, 1879. The amounts are not included in the total of "railroad transportation paid" (see Statutes, vol. 20, page 420) :

Union Pacific Railroad Company, service of 1880 .....	\$384,093 58
Central Pacific Railroad Company, service of 1880.....	381,834 89
Kansas Pacific Railroad Company, service of 1880 .....	103,129 77
Sioux City and Pacific Railroad Company, service of 1880...	10,181 06
Denver Pacific Railway and Telegraph Company, service of 1880 .....	1,812 60

<b>Total for 1880.....</b>	<b>\$881,051 90</b>
Union Pacific Railroad Company, service of previous years .	65,408 47
Central Pacific Railroad Company, service of previous years.	49,144 56

<b>Total for previous years .....</b>	<b>114,553 03</b>
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<b>Amount certified during the fiscal year.....</b>	<b>996,604 93</b>
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## STATEMENT OF COLLECTING DIVISION.

Balance due United States, brought forward from last report.....	\$478,731 48	
Balance due United States on account of postmasters becoming late during the fiscal year.....	293,057 59	
		<hr/> 771,789 07
Amount collected during the year.....	\$341,720 88	
Amount charged to "suspense".....	2,675 48	
Amount charged to bad and compromise debts.....	2,755 41	
		<hr/> 347,151 77
Balance remaining due United States.....		424,637 30
Of which there is in suit.....	246,250 39	
Not in suit.....	178,386 91	
		<hr/> 424,637 30
Balance due late postmasters, brought forward from last report.....	\$46,250 70	
Amount becoming due during the fiscal year.....	36,572 48	
		<hr/> 82,823 18
Amount paid during the year.....		26,514 92
		<hr/> 56,308 26
Balance remaining due late postmasters.....		56,308 26
Amount in suit June 30, 1879.....		\$245,694 47
Amount submitted for suit during the fiscal year.....		15,153 19
		<hr/> 260,847 66
Of which there was collected during the year.....	\$12,647 04	
Amount otherwise settled.....	1,950 23	
		<hr/> 14,597 27
Balance remaining in suit.....		246,250 39
		<hr/> 246,250 39
Amount collected from late postmasters on account of interest and costs.....		\$2,143 68

I have the honor to invite your special attention to the following extract from my annual report for last fiscal year, and to renew the recommendation therein contained:

## ACCUMULATION OF VALUELESS FILES.

I have the honor to call your attention to the vast accumulation of accounts-current, money-order statements, paid money orders, and other papers in the files of this office, to which reference is never had, and which are occupying rooms very much needed for the current files.

I suggest that Congress be requested to grant to the Postmaster-General authority to destroy or sell as waste paper all returns, statements, and paid money orders pertaining to the accounts of postmasters which have been finally settled and closed, and which have been in the files not less than ten years. The ledgers and registers of the office will show the accounts as audited, and all necessary information can be obtained from them, the papers above mentioned being the postmasters' returns to this office on which their accounts were audited and settled.

The accompanying tables, numbered from 1 to 31, inclusive, exhibit in detail the transactions of the department for the fiscal year.

I have the honor to be, very respectfully,

J. M. MCGREW, Auditor.

Hon. HORACE MAYNARD,  
Postmaster-General.

## Statement of the postal receipts and expenditures of

Number.	States and Territories.	Receipts.				
		Letter postage.	Waste paper and twine.	Box rents and branch offices.	Postage-stamps, stamped envelopes, and postal cards.	Total receipts.
1	Maine .....	\$19 43	\$143 80	\$25,454 75	\$488,771 56	\$514,389 54
2	New Hampshire .....	5 70	131 65	16,140 93	291,997 74	308,276 02
3	Vermont .....	5 90	144 88	11,533 38	265,311 53	276,995 09
4	Massachusetts .....	9 71	1,235 55	112,411 02	2,146,650 92	2,260,308 10
5	Rhode Island .....	7 58	99 15	20,528 70	240,875 08	261,510 51
6	Connecticut .....	9 02	193 61	41,873 87	644,155 00	686,231 50
7	New York .....	183 36	4,323 32	177,035 24	6,018,792 70	6,200,334 62
8	New Jersey .....	28 72	193 10	26,086 29	678,622 38	704,980 58
9	Pennsylvania .....	221 20	1,104 47	92,155 94	2,888,221 75	2,981,703 36
10	Delaware .....	1 75	15 82	1,658 70	78,951 43	80,627 70
11	Maryland .....	21 33	93 73	10,450 22	580,717 70	591,282 98
12	Virginia .....	22 83	68 58	12,044 88	483,600 81	495,787 10
13	West Virginia .....	12 38	36 14	4,160 80	172,651 83	176,881 15
14	North Carolina .....	11 64	51 99	8,650 72	243,500 35	252,214 70
15	South Carolina .....	19 18	16 93	6,669 69	201,822 34	208,528 14
16	Georgia .....	34 80	167 20	16,657 55	390,419 57	407,279 12
17	Florida .....	6 50	15 73	5,268 06	96,313 86	101,604 15
18	Ohio .....	135 53	1,702 96	83,948 52	2,107,799 22	2,193,596 23
19	Michigan .....	127 03	630 97	68,612 38	1,074,100 53	1,143,470 91
20	Indiana .....	44 86	678 40	48,185 01	875,523 22	924,431 49
21	Illinois .....	61 43	2,006 74	108,703 56	2,572,472 57	2,683,244 30
22	Wisconsin .....	79 04	357 03	47,478 10	767,014 95	814,929 12
23	Iowa .....	58 43	488 78	70,430 67	977,445 43	1,048,428 31
24	Missouri .....	118 46	674 19	34,087 28	1,288,376 62	1,323,256 55
25	Kentucky .....	46 37	169 43	17,409 24	493,425 24	511,110 28
26	Tennessee .....	30 12	96 54	10,812 91	366,510 35	377,449 93
27	Alabama .....	35 72	71 01	12,442 63	262,399 77	274,949 13
28	Mississippi .....	19 17	50 94	12,682 74	206,523 59	219,276 44
29	Arkansas .....	21 20	50 78	9,596 91	184,407 56	194,076 45
30	Louisiana .....	61 36	71 04	18,654 57	319,964 06	338,751 03
31	Texas .....	75 53	158 38	41,795 92	551,898 04	593,927 87
32	California .....	83 04	636 83	63,228 03	903,627 25	967,575 15
33	Oregon .....	5 67	34 23	11,790 43	126,960 21	138,790 54
34	Minnesota .....	88 13	106 84	28,950 38	505,410 03	534,645 39
35	Kansas .....	89 20	195 32	37,416 57	573,253 32	610,955 20
36	Nebraska .....	30 14	74 04	18,985 93	300,648 37	319,747 48
37	Nevada .....	47 66	20 29	13,407 50	81,331 25	94,806 70
38	Colorado .....	49 37	134 55	38,469 43	305,164 09	343,817 44
39	Utah .....	23 21	71 86	6,168 10	88,609 85	94,933 02
40	New Mexico .....	2 82	12 04	1,949 95	32,201 01	34,166 72
41	Washington .....	14 94	6 85	3,414 10	47,627 77	51,063 66
42	Dakota .....	17 53	51 29	8,240 34	99,794 72	108,103 88
43	Arizona .....	74	23 30	2,837 35	31,972 71	34,834 10
44	Idaho .....	7 42	4 61	8,241 75	27,567 57	29,821 35
45	Wyoming .....	4 71	5 63	2,834 25	34,960 58	37,805 17
46	Montana .....	8 00	17 69	7 410 75	52,215 85	59,652 29
47	Alaska .....		3 50		449 85	453 35
48	District of Columbia .....	16	148 45	5,051 65	208,776 34	213,976 00
Deduct miscellaneous items .....		2,017 81	16,881 15	1,426,078 50	31,379,868 47	32,824,846 02
Add miscellaneous items .....		76,735 11		2,776 86	114,251 68	188,209 93
		78,752 92	16,881 15	1,428,301 73	31,494,120 15	33,013,055 95

the United States for the fiscal year ended June 30, 1880.

Expenditures.						Excess of expenditures over receipts.	Excess of receipts over expenditures.	Number.
Compensation of postmasters.	Clerks for offices, rent, light, and fuel, and incidental expenses of post-offices.	Compensation of letter-carriers.	Compensation of route-agents, postal railway clerks, mail messengers, and supply of special offices.	Transportation by States.	Total expenditures.			
\$171,662 27	\$47,207 49	\$11,907 70	\$45,971 64	\$232,771 04	\$509,520 14	.....	\$4,869 40	1
116,852 01	19,693 79	4,584 21	18,757 65	103,057 88	262,946 44	.....	45,329 58	2
114,937 90	14,573 64	.....	15,880 94	144,853 32	280,245 80	\$13,250 11	.....	3
352,527 93	321,433 33	224,630 12	264,135 08	340,371 46	1,503,097 92	.....	757,210 18	4
40,217 66	32,270 26	23,750 55	8,987 22	41,646 38	146,872 07	.....	114,638 44	5
169,496 12	67,137 47	27,903 75	50,510 17	228,987 08	544,034 59	.....	142,196 91	6
739,616 24	101,591 27	645,025 25	368,886 40	1,529,115 00	4,384,235 06	.....	1,816,099 56	7
187,438 63	46,994 70	65,874 63	34,546 22	231,183 81	566,037 99	.....	138,892 59	8
507,003 43	364,496 70	345,487 68	209,576 60	878,306 46	2,484,870 87	.....	496,832 49	9
23,731 71	5,829 62	8,649 23	9,623 05	25,066 51	72,900 12	.....	7,727 58	10
91,012 76	79,408 53	69,609 44	58,901 09	342,802 58	641,734 40	50,451 42	.....	11
166,429 66	48,329 07	22,784 92	47,903 34	437,026 41	722,473 40	226,736 30	.....	12
67,684 31	13,369 05	5,426 06	13,207 59	113,500 82	213,187 83	36,326 68	.....	13
104,040 61	19,283 70	.....	32,471 31	246,758 88	402,554 50	150,339 80	.....	14
69,255 12	12,858 81	6,821 00	27,010 69	160,310 81	276,256 43	67,728 29	.....	15
123,944 23	46,964 65	16,047 31	81,625 59	320,884 40	589,466 18	182,187 06	.....	16
42,926 05	8,602 80	.....	14,312 24	158,946 71	224,787 80	123,183 65	.....	17
487,682 79	232,203 91	144,080 66	490,738 61	1,275,880 92	2,630,586 89	437,000 66	.....	18
348,400 52	90,306 16	39,731 46	92,672 73	432,741 13	1,003,852 00	.....	139,618 91	19
302,131 23	87,989 24	49,158 10	104,284 03	433,182 76	976,745 36	52,313 87	.....	20
554,552 99	396,383 50	193,070 80	351,223 22	1,015,989 17	2,511,219 68	.....	172,024 02	21
256,634 05	68,328 07	27,499 97	60,880 10	350,522 18	763,864 37	.....	51,064 75	22
382,675 21	68,150 26	23,789 30	103,042 95	490,065 43	1,067,723 15	19,299 84	.....	23
262,120 62	174,053 78	131,994 20	207,448 86	788,200 87	1,563,828 33	240,571 78	.....	24
145,246 81	45,869 39	34,438 21	44,442 69	364,720 07	634,717 17	123,606 89	.....	25
112,079 62	47,463 61	20,306 88	70,129 87	211,075 76	461,055 74	83,605 82	.....	26
101,552 74	25,272 95	5,117 12	26,115 35	303,316 49	461,374 65	186,425 52	.....	27
101,052 62	14,066 68	.....	14,567 37	195,914 89	326,201 56	106,925 12	.....	28
86,886 69	17,458 17	2,235 80	20,337 07	592,733 89	719,651 62	525,575 17	.....	29
65,301 69	60,603 49	44,157 57	24,977 88	331,678 23	526,718 86	187,967 83	.....	30
211,564 70	64,896 46	9,840 86	42,168 21	967,340 45	1,295,810 68	701,882 81	.....	31
207,122 67	140,020 10	65,120 71	81,065 95	1,137,948 96	1,631,278 39	663,703 24	.....	32
50,491 42	11,188 02	3,617 70	12,751 34	275,738 26	353,786 74	214,996 20	.....	33
170,750 09	45,216 04	20,678 29	62,728 38	295,032 46	594,405 26	59,759 88	.....	34
235,774 91	40,794 51	7,879 67	71,421 76	496,727 62	852,598 47	241,643 27	.....	35
113,567 56	22,096 38	7,188 89	62,339 94	638,312 84	843,505 61	523,758 13	.....	36
41,428 33	11,577 55	.....	2,550 01	214,345 00	269,901 49	175,094 79	.....	37
82,335 66	43,184 50	5,252 25	23,780 96	378,782 66	533,336 03	189,518 59	.....	38
39,184 24	11,176 50	.....	10,071 41	238,322 95	298,755 10	203,822 08	.....	39
15,268 07	2,059 50	.....	1,316 66	246,549 67	265,193 90	231,027 18	.....	40
23,121 09	2,206 80	.....	4,670 33	109,650 63	139,648 85	88,585 19	.....	41
47,856 87	8,004 68	.....	2,814 31	238,030 75	296,706 61	188,602 73	.....	42
16,338 46	2,327 00	.....	82	373,790 39	392,456 67	357,622 57	.....	43
16,087 82	1,848 91	.....	1,042 72	165,379 56	184,359 01	154,537 66	.....	44
14,667 58	3,858 25	.....	142 60	143,697 50	162,365 93	124,560 76	.....	45
26,763 44	4,066 65	.....	58 62	201,305 46	232,194 17	172,541 88	.....	46
222 39	.....	.....	.....	.....	222 39	.....	230 96	47
3,767 85	104,542 46	43,990 57	106,663 21	.....	258,934 09	44,957 49	.....	48
7,701,418 27	4,097,858 40	2,357,650 86	3,488,724 78	18,442,568 00	36,088,220 31	7,150,110 26	3,886,735 97	
.....	.....	.....	70 36	246,954 21	182,686 38	182,686 38	.....	
17,365 94	40,905 40	6,066 85	.....	.....	.....	.....	188,209 93	
7,718,784 21	4,138,763 80	2,363,717 71	3,488,654 42	18,195,613 79	35,905,533 93	6,967,423 88	4,074,945 90	

# REPORT

## OF THE

### COMMISSIONER OF AGRICULTURE.

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*To the President :*

I have the honor to submit my fourth annual preliminary report, it being the nineteenth report since the organization of the department in 1862.

During the four years of your administration now drawing to a close our farmers have rejoiced in the realization of higher rewards for agricultural labor than during any other continuous four years in our history. They have been years of exceptionally good crops of all the different staples grown either for home consumption or export; and as the European nations to whom we look for a market have during the same period failed, from disastrous seasons, to harvest the usual quantity of farm products, a steady demand at good prices has existed for our entire surplus of wheat, corn, cotton, meats, and dairy products, until the aggregate annual amount exported has attained a value of more than \$271,000,000 in excess of the value of similar exportations during any like number of previous years. These unprecedented crops, the bountiful gift of an All-Wise Providence that governs in the affairs of men, have afforded constant and profitable occupation not only to the farmers but to the manufacturing and commercial classes, as well as to the great transportation companies whose trains and fleets have had uninterrupted and remunerative employment, notwithstanding their own increased capacity and the ever eager competition of new lines. Indeed there is no profession, no trade, no occupation, no man so rich and exalted nor yet so poor and unknown, but has shared in their widespread and beneficial influences.

The following tables exhibit the immense value of the most important of our agricultural products during the several years named and the value of the exportations thereof for the same period.

*Value of the principal agricultural productions by calendar years.*

Breadstuffs, animals, animal matter, cotton:

1877 .....	\$1, 644, 820, 578
1878 .....	1, 448, 570, 866
1879 .....	1, 919, 954, 397
1880 (estimated) .....	2, 000, 000, 000

*Value of the agricultural exports for the fiscal years ending June 30, 1877, 1878, 1879, 1880.*

Products.	1877.	1878.	1879.	1880.
Animals and animal matter .....	\$140,564,066	\$145,587,515	\$146,641,233	\$166,400,428
Breadstuffs, &c .....	118,126,940	181,811,794	210,391,068	288,050,201
Cotton, &c .....	183,253,248	191,470,144	173,158,200	221,517,323
Wood, &c .....	23,422,966	21,747,117	20,122,967	22,000,000
Miscellaneous .....	58,652,719	52,245,306	53,843,028	49,000,000
Total agricultural exports .....	524,019,939	592,861,876	604,156,492	746,967,952
Total exports .....	689,167,390	722,811,815	717,093,777	823,946,353
Per cent. of agricultural matter .....	76	82	84	90

This shows an unusually prosperous condition, and that, to-day, ours is pre-eminently the agricultural country of the world. The casual reader, and the most indifferent student of statistics cannot but be struck with the large proportion that agricultural products as shown by the above table bear to the total exports of the United States; and every man of intelligence in pondering the fact must stand amazed that the agricultural interests of the country have not received more attention in State and national legislation.

#### DIVISION OF CHEMISTRY.

This important division of the department is now confined to a room in the present building 20 feet square, with two basement rooms of the same size, and a small closet. It is utterly impossible, with such lack of conveniences, to promptly perform a great deal of work, any delay in which, and in publishing the facts thus only to be ascertained, is a loss to the country. The work is daily accumulating. It comes to us from every part of the United States and her Territories. Its value is almost beyond computation. The numerous experiments and analyses that have been made in this division serve to illustrate, in part, how essential to the proper working of the department, and, as a consequence, to the country, is a well-appointed laboratory.

Being the national laboratory of a great people, it should have greatly increased facilities for examining and determining the many important questions daily coming up for investigation.

The small increase in the appropriations for the laboratory has enabled this division to extend its work in various ways, but particularly and profitably in verifying the results of experiments heretofore made in the examination of the juices of different saccharine plants. Seeds of 42 supposed varieties of sorghum, bearing in most cases the name of the grower or of the locality whence obtained, were planted in a little patch of ground attached to the department, and the resulting plants subjected to daily examination and analysis from the appearance of the tassel until November 22, at which time the stalks and the ground were alike hard frozen. In these daily examinations under the immediate direction of the chief chemist, there were employed, in addition to the regular force, 11 assistants (chiefly young graduates of chemical schools),



and a very large amount of valuable work was accomplished. In all something over 3,500 analyses were made, all doubtful results being verified and corrected by repetition. This careful work served to sustain every statement heretofore made by the department in relation to these sugar-producing plants, and affords a sure basis for estimating the profit that may be derived from the manufacture of sugar from these varieties of cane, and will be of great value to all persons engaged in sugar production who may carefully study the tabular statement to appear in the forthcoming detailed report of the chemist.

Among the varieties of sorghum sent to us under their different local names many were found, when grown, to be identical. The number of distinct varieties of value for making sugar has been reduced to 25, so that we may say with certainty that we have growing in this country at least that number of separate varieties concerning which there remains only to be determined what soil and climate is best suited to any particular sort. The difference in the quality and quantity of saccharine matter in the various kinds is so slight as to be a matter of little consideration.

The variety generally known as Early Amber, but sent to us under many different names, proves to be somewhat earlier than any other and the equal of any in the richness and purity of juice, although not quite so productive as the larger and later varieties.

In this connection it may be well to refer to the experiments which have been made in the grounds of the department with machinery adapted to the manufacture of sugar in a commercial way. It was considered important to undertake the work on a scale of this magnitude in order that the large number of farmers and others who were ready to engage in the business should be satisfied as to its practicability and profitableness—that the proportion of crystalizable sugar found in laboratory experiments to be present in the stalks of sorghum and of corn (maize) could be secured without difficulty and with profit as an article of commerce. A careful estimate showed that the cheapest outfit of machinery entirely suited to this purpose would cost in the city of New York about \$10,000, and that to have the cane grown wherever vacant land could by chance be rented in the vicinity of Washington, or neighboring farmers be induced to undertake an untried crop; to haul the cane long distances, and to manufacture would cost several thousand more. Accordingly an appropriation of \$15,000 was asked for and was voted by the Senate, but was reduced in the House of Representatives to \$6,500, and so finally passed both branches of Congress. Not only was this sum entirely inadequate to the object in view, but available so late as to render the planting of a sufficient supply of cane entirely impossible. Pending legislation, and in anticipation of more favorable action on the part of Congress, I had conferred with Messrs. Colwell Brothers, large manufacturers of sugar machinery in New York City, and had notified them that I would probably wish to purchase a

complete sugar-mill (with vacuum pan and centrifugal) similar to those used on sugar plantations in Louisiana and Cuba. When the appropriation was cut down from \$15,000 to \$6,500 and the purchase could not be made, these public spirited gentlemen declared that the machinery should be at my service upon my own terms rather than an experiment of so much importance to the country be put over to another season. Such parts of the machinery as they had not in stock and were too busy to prepare they caused to be made in other shops, brought the whole to Washington, superintended its erection and loaned their experienced men to start and run the mill until others detailed for the purpose should become familiar with its management. With the usual delays incident to erecting and starting a new mill, and the changes in gearing found on starting to be necessary, the work of grinding, &c., which was expected to be begun September 1 was delayed until after the 1st of October. Then followed a break in the machinery which delayed operations two weeks longer, so that it may be said the work was not fairly commenced until the middle of October, fully six weeks later than it should have been.

Meanwhile the cane had been cut and drawn up to the yard, and was not improved by being piled in large ricks. From late planting (the greater part on poor land) it was far from promising to begin with, much of it being less than half an inch in diameter, and rapidly deteriorated from heating in the rick while awaiting repairs to the machinery.

Mr. Theodore Kolischer, a sugar manufacturer, who had experience in making beet sugars in Germany and cane sugars in the West Indies, was selected to treat the juice precisely as he would the juice of the tropical cane, and then to make such modifications and suggestions as the character of the juice would seem to require. His report will be appended. Mr. Kolischer hoped to build up sufficient granulation in the vacuum pan to enable him to strike directly into the centrifugal, as is usual with tropical cane; but this he did not succeed in doing. He, however, obtained some barrels of sugar from the first boiling by letting it stand for a few days and granulate in the tanks. This sugar is well crystallized and polarizes 88; is yellowish green in color and not attractive in appearance, but will command a paying price for refining. The sirup made at first was not as clear and fine in flavor as was afterwards obtained. When Mr. Kolischer's time expired there remained a sufficient quantity of cane on hand for three days' work, but cane of very inferior quality, since it had been subjected to severe frosts by which the joints had been rendered more or less acid. The experiments were continued by employes of the department who had become familiar with the machinery, and by them better results were obtained from this injured cane than from that first handled. This was chiefly due to the more careful defecation of the juice under the personal direction of Professor Collier, and it is a matter of regret that there was not a supply of cane sufficient to permit of many other experiments in the defecation,

clarification, and crystallization of the juice and sirup, important experiments which must be postponed until another season. The supply of cane exhausted, an experiment was made in reboiling the molasses which had not given evidence of granulation. Upon diluting this with water, clarifying by boiling and skimming, and further boiling in vacuo, considerable sugar was produced of excellent quality and color, as evidenced by the fact that it polarizes 99, and is valued to-day by one of the leading grocers of this city at nine cents per pound. On the whole these experiments, although made under very unfavorable circumstances, have been attended with so fair a measure of success as to give assurance that, with the machinery as now in position and an adequate amount of cane, planted at the right time and cultivated in the right way, both sorghum and corn-stalks can be profitably employed in the production of sugar for market. It is to be hoped that Congress will vote the funds necessary to continue these experiments as long as they promise to be of great value to the people.

A tabular statement showing the condition of the industry among the people at large will be found appended to this report, by which it will be seen that very decided progress has been made during the past year in the direction I had the honor to propose some two years since, to-wit, the manufacture at home of all the sugar we consume, with some to spare for export. This statement and the many letters upon the subject from intelligent correspondents in every part of the country justify the belief that the crop of 1884 will terminate our dependence on foreign nations for this article of prime necessity.

In addition to the work of this division above indicated, the examination of our native grasses and forage plants from different parts of the country has been and is being carried forward and, besides, analyses—over 150 in all—are making or have been made of twenty different well known genera or species of such grasses as are now extensively grown, for the purpose of determining their comparative composition and nutritive value at different stages of their development.

Some idea of the value of this work, in mere dollars and cents and aside from its “consequential” benefits, may be gained from a consideration of the fact that, among individual chemists operating on their own account, the current price for a single mineral determination is about \$10, and that analyses for organic constituents are even more expensive. But accepting \$10 as the average value of each specific determination, the chemical work of the department from June, A. D. 1880, to January, 1881, will make the following exhibit:

150 grasses, 7 determinations each.....	\$10,500
3,581 canes, 4 “ “ .....	143,240
Total .....	<u>\$153,740</u>

#### BEET SUGAR.

Since the publication of the last Annual Report there has been prepared in the department a report on the “culture of the sugar beet, and

the manufacture of sugar therefrom in France and the United States." This report is intended to show the conditions favorable to the culture of the sugar beet, and the methods of planting, manuring, cultivating, harvesting, and storing the crop in France, the later improvements introduced in the methods of manufacture of sugar from the beet, and the social and fiscal relations effecting the beet-sugar industry in that country. That portion relating to the manufacture is not intended to give details relative to the methods employed, but to furnish to prospective manufacturers correct notions concerning improvements in apparatus, &c., that have been made up to 1878, and estimates of the cost of requirements for a complete factory. The report is accompanied by illustrations of most of the improvements mentioned, and of the new instruments employed in cultivating the root.

In connection with this report of the experience of the French in the manipulation of this great industry, it seemed advisable to give a statement of the results of the practical experiment making at Portland, Me., in the introduction of the industry in that section.

A representative of the department was sent to make an examination and report upon it. It was found that the Maine Beet Sugar Company had erected works with all the appliances for extraction of sugar from beets, and with a capacity of 150 tons per day. They had made contracts with seventeen hundred farmers for the culture of 1,200 acres of roots. The culture was, therefore, eminently experimental, but from conversations with some of the farmers it was found that very few were able to give intelligent accounts of their operations or of the expenses attending them. The sugar company issued circulars giving minute instructions concerning the methods that should be followed in the work, and in order to determine how closely these instructions were followed, the results obtained, and the cost per acre of producing the crop, a circular of questions covering these points was mailed from the department to all persons who had grown beets for the company, whose names and addresses could be obtained. Replies to these circulars—200 of the first to 1,500 of the latter—were not as numerous as I had had a right to expect. The few received show the influence of the various soils, and the methods of culture and manuring upon the crop. If we accept the more reasonable estimates of the value of farm labor and of stable manure, it appears that the cost of producing a crop and delivering at stations within an average haul of half a mile (with the cost of stable manure and artificial fertilizers added), is about \$60 per acre, and that the crops produced with the care that this expenditure demands should amount to from 15 to 23 tons, which, at the average of \$5 per ton, the price paid by the company, would net to the producer \$15 to \$23 per acre.

The report upon the experiment in Maine is accompanied by a statement of the history of former experiments in this industry in the United States, and the encouragement and aid given for its promotion by the general and State governments.

Of the combined reports, Congress ordered the printing of 20,000 copies, which should have been printed and distributed in time to serve for the information of persons who desired to engage in the cultivation of beets and the manufacture of sugar during the past season, but which are yet in the office of the Public Printer, and a delay of a year in enterprises of public importance has been the result.

#### MAINE BEET SUGAR COMPANY.

The condition of the Maine Beet Sugar Company at the present time is well described in the Eastern Argus, of October 28, 1880, as follows:

The fall and winter work of the Maine Beet Sugar Company is now fairly begun, and the factory is in full operation. The factory employs in all its departments, including the storage and shoveling the beets, unloading the cars, and removing the pulp, about 125 men. Important improvements have been made since last year in the machinery, which is now equal to the best in Europe. Last week the product of sugar and molasses from the cut and sliced beets was over 11 per cent. of the whole. The factory consumes at least 25 tons of coal per day. Work is pushed day and night without cessation, except one hour at noon and at midnight. From 125 to 150 tons of beets are worked in 24 hours. The company has on hand some 6,000 tons of beets. About 10,000 tons in all will be worked during this season. The factory will probably continue in operation until about Christmas. Beets are now arriving daily at a rapid rate. The cars bring about 300 tons, and farmers' wagons about 50 tons per day. The crops average fully as well as last year, notwithstanding the drought which diminished the yield at least one-third from what it would otherwise have been. The beets are of about the same average quality as last year. They are not so good as in Europe, owing to the improper cultivation and the imperfect removal of the leaf crown, which in Europe is always cut off and retained by the farmers. About two-thirds of the beets are raised in the State of Maine from Bangor, Dexter, Skowhegan, and North Anson to the State line, and from Farmington to Belfast and Rockland. They come by the Maine Central, Knox and Lincoln, Somerset, Grand Trunk, Rumford Falls, and Buckfield, Portland and Ogdensburg, Portland and Rochester, Boston and Maine (?) Eastern, Boston, Concord and Montreal, Passumpsic, Fitchburg, Delaware and Hudson, Hoosic and Western Railroads as far as Schenectady and Fort Hunter, New York.

Beets are sent from the Connecticut River Valley and the Merrimac Valley, New Hampshire, as well as from the eastern townships of Canada. This great area of country supplies beets which all ought to be raised, and as many more, within 20 miles of Portland. Farmers in the surrounding country have generally done well this season. The estate of Cyrus Thurlow, in Deering, has received from the factory this year \$430 in cash, and \$50 from the sale of tops for greens, making nearly \$500 cash product from three acres of land.

With a full supply the factory could work with the present machinery in five months 20,000 tons of beets, which would turn out 2,000 tons of sugar and molasses in a single season.

Last year the waste products were largely lost for want of a demand for them. This year the waste has all been bought for manure by one of our enterprising citizens, at the rate of \$1 per ton. Over 2,000 tons of beet pulp are already sold in advance at the above rate, and the demand for it has far exceeded the supply.

#### EXPERIMENTS IN DELAWARE.

Another experiment in the cultivation of the beet and its manufacture into sugar has been made in the State of Delaware. To encourage the enterprise the State legislature appropriated \$300 in 1877 to be offered as premiums to farmers for crops of sugar-beets, and in 1878 \$1,500 were appropriated for the same purpose.

Beet culture was begun four years since, and results proving better with each succeeding year, the experiment of making beet sugar was undertaken in 1878 by the Delaware Beet Sugar Company with such imperfect apparatus as happened at hand. The crop to be worked up amounted to 350 tons of roots (containing an average of 9 per cent.



of sucrose) from 75 acres. From imperfect arrangements these experiments were not very satisfactory. Unfortunately the past season proved very unfavorable to the beet crop in the State, again bringing the supply of roots below the requirements of the company, whose new and complete mill, made by Colwell Brothers, of New York, and costing \$30,000, has a capacity of 60 tons of roots per day of 24 hours, gives employment to 42 men, at average wages of \$1 to \$1.25 per day and consumes daily 20 tons of fuel, costing, delivered at the factory, \$1.75 per ton. With the very small quantity of material they have had to work up this year the company has yet realized enough to cover all the running expenses. With such a crop as was expected a fair profit would doubtless have resulted. As it is, the company has been so encouraged that measures are now being taken to secure contracts for a crop of 2,000 acres of beets, and an increase of the capacity to 100 tons per day, if the requisite quantity of raw material can be contracted for. The work in the factory has not been far enough completed to give accurate details as to the results obtained. Enough is however known to determine that the yield in sugar from the centrifugals and of the first crystallization, testing 95 per cent., will reach 100,000 pounds, for which 8 cents per pound has been offered. The molasses is still to be worked over for seconds, after which the residue will be delivered, according to contract already made, for 18 cents per gallon. The pulp from the diffusers amounting to from 40 to 45 per cent. of the weight of the roots worked is readily sold for \$1 per ton, delivered on cars at the factory. Indeed, more orders for pulp have already been received from the farmers than can be filled this year. As this company seems to lack neither capital, intelligence, practical experience, nor transportation facilities, its ultimate success may be confidently predicted.

If, as stated, the implements used in the cultivation of the beet are peculiar to European manufacturers, there would seem to be no good reason why the desire of the growers in this country that they be admitted free of duty, at least until our manufacturers are prepared to supply them, should not be allowed.

#### LOUISIANA SUGAR.

In its earnest efforts to promote the sorghum sugar industry, as adapted to the whole country—and the more earnest because adapted to the whole country—the Department of Agriculture does not overlook the importance of the cane-sugar production in Louisiana and a few other Southern States to the citizens of those States and to the country at large. In the introduction by the department a year or two since of some foreign varieties of cane, a step has been taken which it is believed will in a few years—and when the imported cane (confined at present to a few planters for propagation and experiment) shall have been widely disseminated—add largely to the Louisiana production. The crop of the past season, though shortened by unusual severe weather in Novem-

ber, will be larger than any made since 1861, the year of largest production. The quality of sugar manufactured is represented to be excellent, much above the average in grain and color.

The success reported by our correspondents as attending the growth of sorghum in Louisiana and Texas, and the demonstration that two crops a year of this species of cane can readily be grown and worked up before frost in all of the extreme Southern States, warrants the belief that the sugar planters of that region will ere long find it to their advantage to substitute in part, if not altogether, the cultivation of sorghum for that of the ribbon cane. Such a change is made the more probable by the fact that from one-sixth to one-third of the sugar lands of the Southern States has to be given up annually to the production of seed cane if intended for the production of sugar cane, whereas the whole could be devoted to sorghum, which produces its own seed and yields a full crop of sugar beside; and, further, that ribbon cane, from the time required for ripening, is frequently overtaken by frosts, whereas two crops of sorghum can be grown there during the same time without danger of being so overtaken.

The repeated experimental examinations made by Dr. Collier in the laboratory of the department furnish satisfactory evidence that sorghum cane is the equal of sugar cane in saccharine matter, yields as much per ton, is more easily cultivated, and can always be planted after frosts have ended in the spring, and before they begin again in the fall; and the Louisiana planters, who have not been wanting in intelligence to detect, and in readiness to adopt, methods that are useful, will be quite sure, we think, to profit by the opportunity that sorghum affords.

#### DIVISION OF STATISTICS.

The number of chief correspondents and their assistants who report regularly to the Statistical Division of this department is about four thousand. These are necessarily selected from among persons whose interest in scientific and practical agriculture induces them to serve in this capacity, without other remuneration than the receipt of the publications of the department, and such seed as the department distributes from time to time. The information given by these correspondents forms the basis of all our records of the condition of the crops and of other estimates. Evidence of the intelligent and truthful manner in which these reports are made and with which they are collated and arranged, is to be seen in the fact that the reports of the division published from month to month are sought for, not only by the farmers of our own land, but by members of Congress, boards of trade, and business men both here and in foreign countries. The clerks of this division have been actively employed in estimating the increase or decrease in areas of every principal crop; in preparing for publication the monthly reports of the condition of crops, comparing the same with their condition in other years, and so estimating their prospective average yield; in tabu-

lating the annual outturn of these crops and noting the causes of failure or success; in computing the number of live stock in the several States and taking note of its condition; in preparing schedules of wages for farm and mechanical labor, and in recording the value of farming lands and the relative increase or decrease in the same throughout the country. The latter investigation is the first of the kind (if we except the weak attempt in 1867) made in the history of the department, and if continued for a number of years sufficient for comparison promises to be of great value in determining the special advantages of different sections for particular purposes. But valuable as is the work already done in this direction, there remains much that cannot be accomplished until an increase of force in this division is authorized and provided for.

The space now allotted to this division should be more than double, and twice the number of clerks now employed would find constant occupation in preparing for publication the necessary tables relative to crops, labor, herds, &c., in listing the agricultural wealth of the country month by month and year by year. As before said, the function of this division is to give to the public the latest phases and prospects of the growing crops, to show the extent of land they cover, to record the influences favorable or unfavorable which affect their growth, to sum up their final product, to estimate their value to the farmer, and to strike the balance-sheet of the agricultural enterprise of each year.

This division is also called upon to investigate the agricultural systems of foreign countries, to compare their results with ours, and to indicate desirable and practicable improvements in our modes of culture. Its great value lies in the accuracy of its reports, which have attracted the admiration and confidence of agricultural and commercial men on both sides of the Atlantic. It is also constantly called upon for information of the most varied character by the public press, and by scientific and business men in all parts of the country. In many instances replies to such requests demand the most careful study and patient research. Such replies can be given only by men thoroughly familiar with our agricultural facts.

I would recommend that this division be enlarged to double its present strength, so as to be able to take up investigations which at present it is unable to touch.

#### DIVISION OF ENTOMOLOGY.

The field work of this division in progress last year was continued early in this.

During the months of January and February Prof. J. H. Comstock, Chief Entomologist of the department, having been directed to inspect the orange trees of Florida, which were reported as being seriously damaged, proceeded to visit the more important orange-growing sections of that State, and in fact nearly every large orange grove in the State, for the purpose of studying on the spot the habits of the

various insect enemies to the orange trees; of ascertaining the extent of the damages done by them, whether worthy of the attention of the department, and, if possible, of discovering a remedy of practical value. He reports the existence of these insects as very general there, and that the damage in many cases is extensive, entire groves having been destroyed.

While in the State the entomologist collected specimens of all insects found infesting the orange and allied trees, and made as full notes as possible, in the time at his disposal, upon the habits of these insects. Living specimens were forwarded to Washington and colonized on small orange trees in the insect-breeding room at the department. In this way the development of all the more important species from the egg to the adult state has been observed.

Leaving this work to be carried on by certain assistants (the details of which will appear more at length in his report herewith), the entomologist and one assistant were sent out in July to make similar investigations in California, frequent complaints of like injury having been received from the orange growers of that State. They proceeded to Los Angeles, where two months were spent in the orange groves of that section, which were found to be badly infested with what are popularly known as "scale" insects. The life history of these creatures was carefully studied and a series of experiments with remedies carried on. The other orange-growing sections of the State were also visited; and later, the entomologist examined the orchards of the Santa Clara Valley and found that the deciduous fruit trees suffer from the ravages of scale insects even more than do trees of the citrus fruit family in the southern part of the State.

Having ascertained at the outset of the investigation that the scale insects are much more destructive to fruit trees than any other pests, a special agent was employed during the summer months to experiment with various substances for their destruction. These experiments, taken with those conducted by the entomologist in California, have produced very valuable results in the finding of remedies that are both efficient and practicable.

While the investigation outlined above has been the special work of this division, much of a more general nature has been done. The number of inquiries respecting various noxious insects continues to increase, and the answering of these inquiries forms a very important part of the duties of the division. During the present year the collection of insects has been transferred to new and secure boxes; and the work upon the biological collection, which was begun last year, has been continued. This collection now consists of 107 boxes of pinned specimens (of which 35 are scale insects), nearly 1,900 slides of microscopic insects, and many alcoholic specimens.

## DIVISION OF BOTANY.

The work of the botanical division has been quietly but steadily prosecuted through the year.

The museum has been rearranged and relabelled, and its cases made more attractive and more accessible to persons desirous of studying the various productions of the country.

About five thousand specimens, many of which were new, have been mounted and prepared and added to the herbarium, which is steadily growing in size and importance, and is now undoubtedly one of the most interesting collections in this or any other country.

The important work commenced in 1879 of describing and illustrating our native grasses has been continued during the past year, and the report of 1880 will be particularly interesting to such as seek intimate and scientific knowledge of our numerous species of valuable grasses.

Such assistance as was possible with the limited means allowed has been extended to agricultural colleges and other institutions of learning desirous of establishing herbariums and agricultural museums.

The correspondence of this division is continually increasing, and serves to diffuse botanical information in its practical and agricultural branches throughout the country.

A botanical collection at all commensurate with the varied flora of so vast a country as this should have far more space allotted to it than is possible in the present building. Every one must see how interesting such a collection would prove to all persons visiting the Capital, and how instructive to every student of agriculture.

The clear presentation to the eye of the number, variety, and nature of agricultural products is a means of public instruction which all civilized countries adopt and acknowledge to be of great value.

## DIVISION OF GARDEN AND GROUNDS.

During the season the distributions from the garden have aggregated 156,862 plants of various kinds. Among these were about 70,000 tea-plants, 3,000 olives, 1,000 coffee, and 500 date palms. About 2,000 plants of European wine grapes have been distributed in southern Texas and Florida.

Experiments which have been made point to the probability that the foreign grape will succeed in parts of Texas equally as well as in California, where it has become a staple crop.

The number of tea-plants now propagating in our grounds is not large, owing to an unexpected failure in procuring tea-seed from abroad. Elsewhere will be found an account of the extended effort making, under the auspices of the department and in accordance with the design of Congress in making an appropriation therefor, to give to the cultivation and manufacture of tea commercial importance.

The Japan persimmon has fruited in various parts of the country, and



its reputation, as being a valuable fruit of its kind, has been fully sustained. Its extreme limit of endurance is not yet settled, but that it will be a valuable addition to the fruits south of latitude 39 is already well established.

A large distribution of coffee-plants has been made in Florida and southern California. By forming plantations at various points the practicability of coffee-culture can be decided, and this can only be accomplished by definite experiments in promising locations. A pound of coffee grown and ripened in the open air by Mrs. Julia Atzeroth, of Braidentown, Manatee County, Florida, has been forwarded to this department, and is probably the first coffee ever raised in the United States by cultivation outside of the green-house.

To meet the requirements of this department there are needed at least one thousand (1,000) acres of land in the vicinity of this city, and if possible in the District of Columbia, with auxiliary tracts or stations in various parts of the United States, and with the requisite buildings and force for working the whole to the best advantage.

The principal station or farm—the one established in this vicinity—should be devoted to the experimental cultivation of all the different plants, cereals, trees, &c., suitable for a climate similar to that of Washington, and especially to the hybridization and production of varieties differing from and better than those now in use. These should be raised here and on the auxiliary farms in quantity sufficient to provide all the seeds, &c., to be distributed by the department; thus doing away with the practice of purchasing them in the general market, and getting at the same time better seed at less cost than is now done.

This principal station being at hand, would have the benefit of frequent inspection by the head of the department, who would thus be constantly informed of its work and of its requirements, and in position to quickly make any needed change or reform. Here, too, the scientific and financial resources of the department could be promptly availed of in any sudden emergency.

The auxiliary stations should be located at points remote from the parent farm and from each other, and have as their prime object careful, practical, and scientific experiments to determine the suitability, or the contrary, of different cereals, plants, &c., for the several sections of country in which the stations are established. In this way would be demonstrated, at the expense of the government (as it should be) rather than at the cost of her private citizens, and in a far more intelligent and decisive manner than is ordinarily the case with the individual experimenter, the economic value and peculiar adaptation (or the reverse) to particular localities of many agricultural products now but little understood.

Here, too, as at the principal station, would be grown for distribution cereals, plants, and the like, the success or failure of which in the hands of the recipient would determine the extent of production at any one station.

These auxiliary stations should be temporary or permanent, large or small, as the case might require. For special purposes it might be necessary to hire and occupy small tracts of land for two or three years to carry out experiments to be completed within that time, while land for more constant use should be held by permanent tenure.

The results to be obtained from such principal and auxiliary farms would be valuable beyond all estimate.

A tract of land more or less suitable for the principal farm and already belonging to the government is the well known Arlington property south of the Potomac. The national cemetery occupies but a small part of this estate and could not possibly militate against the establishment of the experimental farm in question. Though a good part of the land is quite infertile, it could soon be made, from its proximity to a great city whose sweepings would be available, to answer the purposes sought. I would therefore urgently recommend that authority be given to the department to occupy this property, and that the appropriation necessary to carry out the object here indicated be made during the next session of Congress.

I here take occasion to renew the recommendation made relative to another department building as being a necessity for the accommodation of its employes, the number of whom must necessarily be largely increased to be at all commensurate with the work to be done. This building should be erected upon the ground at present occupied by the gardens in rear and at the sides of the existing department building. It should form a hollow rectangular parallelogram, with a front of about 1,000 feet by a depth of about 500 feet, and should include an interior covered court. The building itself should be 80 feet in width, with suitable halls, &c., and with a piazza of proper width around the four sides of the court. It should be fire-proof and well ventilated, and be arranged for offices, for the storage and handling of seeds, and for the continuous exhibition of the agricultural products of this great nation.

There should be provided also ample space within for the display of all implements employed in agricultural pursuits (and I am informed that working models will be furnished by the manufacturers thereof, if the government will provide the building). The interior of this hollow parallelogram should be covered with a glass roof supported on pillars of sufficient height to accommodate, as at the Kew Gardens, those trees and plants that are valuable for economic or ornamental purposes. The early erection of such a building cannot be too strongly urged. Looking to its consummation upon the scale suggested I have had drawings prepared which are herewith submitted.

#### DIVISION OF SEEDS.

By the act of Congress making appropriations for the purchase and distribution of seeds, &c., an entirely new departure in the mode of distribution was made necessary. This act requires that "an equal pro-

portion of three-fourths of plants, seeds, and cuttings shall, upon their request, be supplied to Senators, Representatives, and Delegates in Congress, for distribution among their agricultural constituents, or shall by their direction be sent to their constituents, and the persons receiving such seed shall inform the department of the results of their experiments therewith." In conformity with this provision notice in writing has been given to Senators, members of Congress, and Delegates of the reception of seeds, &c., at the department for distribution, and that an equal proportion thereof was held subject to their order. Some have neglected the notice entirely; others have positively declined to have any charge or care of the distribution of seeds; others have sent lists of persons to whom they wished them sent; while others made return that at some future and more convenient season they might find time to forward directions relative to the disposition of their quota of seeds. The difficulties attending this method of distribution are apparently insuperable; for under this rule the department must hold in reserve for members of Congress living in the North cotton and other seed only useful in the South, and for members living in the valley of the Mississippi, seeds that are of use only on the Atlantic and Pacific slopes. Again, the distribution is rarely made in season and not then in sufficient quantity.

I feel it my duty, from what I know of the injurious working of this system, to recommend the adoption of the method of distribution suggested when I had the honor to appear before the Sub-Committee on Agriculture, on the 18th day of January last, and embodied in a letter addressed to the chairman of that committee bearing date February 27, 1880.

The following is a summary of the distribution of field and garden and flower seeds during the year:

	Packages.
To Senators and members of Congress.....	759, 679
To agricultural societies.....	17, 444
To statistical correspondents .....	139, 729
To granges.....	355, 452
To special farmers.....	127, 644
To miscellaneous applicants .....	181, 305
Total number .....	1, 581, 253

This division is now crowded into the basement of the present building; and not only is its space insufficient but its ventilation so bad as to cause illness among the employés and seriously to impair health. That from twelve to twenty persons should be employed in a room not twenty feet square, and which is cumbered at the same time with the material they are at work on, is something that surely ought to be remedied. There is no other way than by the erection of a new department building, for notwithstanding the employment of every known means in economizing and facilitating the work of this division it has been impossible to do it as it should be done in so cramped a space and with so small a

force. However opinions may have differed heretofore, it is now generally conceded that the distribution of seeds from this department is doing incalculable good.

The increased production per acre of wheat and oats alone which has resulted from our distribution of those cereals during the past few years should suffice to convince the most skeptical of the great value of this work. Taking the last three years as compared with the three previous years, the increase in wheat was 2 bushels per acre. This in forty millions acreage yearly would be eighty millions of bushels increase, or a gain to the country of about \$80,000,000 per annum. Assume, however, that we make, by a judicious distribution of improved seed, but one additional bushel on this acreage, and the increase to the wealth of the country from this source alone will not be less \$40,000,000 per annum.

I do not think it at all impossible so to hybridize and improve wheat through the instrumentality of such farms as I have hereinbefore recommended to be established, as to increase the general production of this cereal 5 or 6 bushels per acre. Our correspondence shows that in some localities an increase to this extent has already occurred.

A comparison of present with former yields will show a like increase in the quantity produced and in the value to the nation of other staples which have been the growth of seed distributed through this division of the department.

In portions of the country the increase in oats—an increase clearly the result of our distributions—has been as high as from 10 to 20 bushels per acre. Need more be said to demonstrate the importance of giving wider scope to the usefulness of this division?

#### MICROSCOPIST.

The microscopist has been engaged during the past year in making microscopical observations of vegetable and animal fibers, parasitic diseases of plants, &c. He reports that among the most prominent of these investigations are those relating to a new blight of the coffee plant, to wheat rust, apple and pear tree blight, orange-leaf blight, orange-tree rust, to diseases of the plum, and to one form of potato rot. He also reports the discovery of a method of treatment with sulphuric acid, by which the germinating power of seeds will be quickened, and that applied to cotton seeds has the effect of removing the fiber therefrom, making it possible to plant the seed with greater regularity than is now done, and by horse or hand power drill.

#### FOLDING ROOM.

This room, like the rooms in the seed division, is in the basement of the present building. From it are sent our annual as well as our special reports, and our monthly and special circulars—a vast amount of printed matter. Crowded in a small space, the employes are hindered greatly in their work. As in the seed division the air here is exceedingly foul and

# 1034 REPORT OF THE COMMISSIONER OF AGRICULTURE.

unwholesome. No system of ventilation can sufficiently remove the impurities of the atmosphere in so confined a space contiguous to boilers and machinery. No remedy will suffice but a change of location. And no change of location can be made until a new building is erected.

## DISBURSING OFFICE.

The following is an exhibit of the appropriations made by Congress for the department, the disbursements, and unexpended balances for the fiscal year ending June 30, 1880 :

	Amount appropriated.	Amount disbursed.	Amount unexpended.
Salaries .....	\$66,900	\$66,900 00	.....
Collecting statistics .....	10,000	9,978 38	\$21 67
Purchase and distribution of seeds.....	75,000	75,000 00	.....
Experimental garden.....	6,000	6,000 00	.....
Museum .....	1,000	1,000 00	.....
Furniture, cases, and repairs.....	4,000	4,000 00	.....
Library .....	1,000	1,000 00	.....
Laboratory.....	1,500	1,500 00	.....
Contingent expenses .....	8,000	8,000 00	.....
Postage .....	4,000	8,000 00	.....
Improvement of grounds.....	6,500	6,500 00	.....
Investigating the history and habits of insects, &c.....	5,000	5,000 00	.....
Investigating the diseases of swine, &c .....	10,000	10,000 00	.....
Printing and binding.....	11,000	10,116 71	\$883 29
Total.....	210,500	209,596 04	\$904 96

Under the recommended enlargement of the department the increased work of the disbursing office would require additional space and force. The business of this office is to audit and pay all accounts, as accounts for salaries and for purchases of all sorts. To it properly pertain the duties of the property clerk and the superintendence of buildings. With an enlarged department the officers should be as follows: One disbursing officer, one assistant disbursing officer, one property clerk and assistant, and one superintendent of buildings, and one or two clerks of lower grade.

## PRINTING.

The delay in getting the annual report of the department before Congress for distribution to the people of the country is something that can and should be remedied. The report of 1879, which should have been put into the hands of Congress for distribution before the adjournment of the early session in 1880, is not yet out of the Government Printing Office, and will not be in the hands of the farmers until the spring of 1881, entailing the unnecessary loss of a whole year. If the department was intrusted with its own printing it could be done in a reasonable time, and with no more expense than is now incurred in the Government Printing Office, which appears to be so overburdened with Congressional and other work that the large edition of the annual report of the Department of Agriculture required is not and cannot be commenced until midsummer of the year following the one for which the report is made. The edition of our annual report is usually 300,000,



and while larger than that of any annual book ever published, is not yet half large enough to meet the reasonable and pressing demand. The plain remedy is to intrust the printing of the department to the care of the department itself, and thus relieve the overtaxed Public Printing Office, while securing the prompt and timely execution of the work under the direction and care of those most interested in having it done properly and promptly, which I am convinced is otherwise impossible.

#### TEA.

The unflagging efforts of the department in the introduction of the tea plant and the manufacture of tea as a commercial product have this year borne fruit, giving promise of a complete realization at an early day of our most sanguine expectations.

At my solicitation and advice, Mr. John Jackson (a native of Aberdeenshire, Scotland, who had been attracted, while traveling in this country for his health, by the publications of the department on the cultivation of the tea plant), visited the Southern States, and having satisfied himself, after thorough examination, of the fitness of soil and climate and the feasibility of making tea of such quality and at such price as would enable the grower and manufacturer to compete in the markets with the tea grower of India, China, or Japan, purchased the estate of Dr. Jones in Liberty County, Georgia, on which were growing patches of neglected tea plants of all sizes, most of them having sprung from a few old trees set out by Dr. Jones in 1850 or thereabout, and the seed of which ripening and falling had taken root and grown into a dense brush or tangle of plants of all ages. Mr. Jackson took these neglected and indeed abandoned plants in hand, laid out a tea garden of one hundred acres, transplanted his smaller plants and obtained others from the stock of the department and from wherever in the South a few could be had suitable for transplanting, and has now one hundred and sixty thousand plants, occupying about forty acres of ground. From the leaves of the older plants he has made samples of tea during the entire spring, summer, and fall months, which have been submitted to the experienced judgment of some of the oldest and best tea houses in the United States and London. Mr. Jackson's report and such of his letters to the department as will prove instructive or interesting or serve to encourage the employment of capital in the production of tea in portions of our country to which it is adapted, will be added as an appendix to this report; as will also the statements of a few of the well-known experts who have examined and passed judgment on the samples submitted to them for appraisal.

Acting under authority of Congress, I have selected, after a careful examination, with the aid of Mr. Jackson's experience, a tract of land suitable for an experimental farm on which the raising of tea on an extended scale will be carefully and thoroughly tried. Of the result there can be no reasonable doubt. American tea, grown and manufactured

on our own soil by ourselves, is destined at no late day to supply the demand of our own people and to enter the world's market in favorable competition with that produced by any other country.

#### ARTESIAN WELLS.

At the last session of Congress it was provided:—

That with a view to the reclamation of the arid and waste lands lying in certain Western States and Territories, the Commissioner of Agriculture is hereby authorized to contract for the sinking of two artesian wells on the plains east of the Rocky Mountains; said wells are to be sunk at such places as the Commissioner of Agriculture shall designate. \* \* \* The sum of \$20,000 is hereby appropriated to carry out the objects of this provision; the same to be disbursed under such rules and regulations as the Commissioner of Agriculture shall prescribe.

Acting under the above provision and appropriation of Congress, I proceeded to make an examination of the arid country lying on the eastern slope of the Rocky Mountains in Colorado. There are large areas of land in this region now lying unoccupied except by wild beasts, and at times by the increasing herds of ranchmen, who, having possessed themselves of the few springs or streams, practically use and control millions of acres of land belonging to the government, for which they pay neither rent nor tax. An examination and study of the geological formation of this locality warrants the belief that water-bearing strata may be found which, fed by the melting snow of the mountain ranges, would furnish flowing streams of water that will serve to bring much of this arid region into market; and the many natural advantages of the country make it absolutely certain that whenever the government shall have demonstrated the existence of water there and the feasibility of tapping it, entry of the land will be made by those who now pasture it, and other persons be able to dig or bore wells at their own charge.

For the first trial-well, I selected the arid plain a few miles from the Arkansas River, adjoining the military reservation of Fort Lyon, which is about midway on an east and west line below the western limit of cultivated lands and the mountains, that is to say, about eighty miles east of the mountains and out upon the great plains. If water can be obtained here, encouragement will be given to try other wells in more difficult places where the water is probably further from the surface, and whose remoteness from settlements makes the hauling of supplies a matter of too great difficulty to be undertaken now with the means appropriated for this year's experiment. For the purpose of exploring the geology of the country a well in the middle of the Arkansas Valley would be as valuable as elsewhere. The location of the present well is so far above the Arkansas River that there will be opportunity to use for irrigation all the water that can be discharged, while if the well had been located twenty or thirty miles from the river, the appropriation would not have covered the transportation of food supplies, of fuel and water for engines, and of boring tools.

After a careful consideration of the object to be accomplished by the exploration for which the appropriation was made, I decided upon the

diamond drill as the tool that ought to be employed, since by its use a core sample of the formation passed through, valuable for comparison with the cores to be taken from the second well authorized, would be obtained. As there was no machine suitable for the purpose in the hands of the manufacturers, the work was necessarily delayed until one could be fitted up specially for the purpose and shipped from the shops of the American Diamond Drill Company at Pottsville, Pa. This was finally completed, and with all the necessary tools shipped to Fort Lyon, where it is now at work under the direction of an expert and trusted drill man, Mr. M. C. Griscom, recommended to me by the above named company, in whose service he had been sent to Australia in charge of and to introduce and operate one of their drills. He is prepared with rods and material to bore 2,500 feet in depth, and is now at work, making reasonable progress from day to day.

#### FORESTRY DIVISION.

The very important work in the preliminary statistical and geographical, as well as economic examination of the forest products of the United States, is still continued by that active, untiring, and intelligent scholar, Dr. Franklin B. Hough, whose labors for the department in this direction have met with the approval and commendation of scientific and practical persons, not only in the United States, but in foreign countries. Applications for, and the highest approbation of his work, as published specially by the department with authority of Congress, have been received from every part of the world. The work for this year, it is believed, will not be less important when completed than heretofore, and an appropriation for its continuance, and for the publication of a large edition of his special report, is recommended.

#### INTERNATIONAL SHEEP AND WOOL SHOW.

By act of Congress April 1, 1880, I was authorized and directed to attend in person or by deputy the International Sheep and Wool Show to be held in the Centennial buildings, Fairmount Park, Philadelphia, in September, A. D. 1880, and to make a full and complete report of the same. With such assistance as was necessary to carry out the intent of the law, I was present at the opening and continued through the exhibition, obtaining samples of the wool of the different sheep exhibited, and such facts and information as was necessary to a compliance with the requirements of the law. A full and complete report of the exhibit and of the information obtained is in course of preparation, and will be forwarded to you for the information of Congress as soon as completed.

#### SILK CULTURE.

The efforts of this department in the encouragement of silk culture have been entirely frustrated during the past season by the loss of the silk-worm eggs forwarded to the department, from having been kept while in transit in so warm a place as to hatch out and die before reach-

ing us. This is much to be regretted, as the interest awakened, if we may judge from frequent inquiries, will necessarily flag for a time, and renewed efforts be required to induce the people to again undertake the experiment of raising cocoons for market or home use.

One great obstacle to the growth of this industry, the want of an assured market where fair prices could be obtained for the cocoons, would be removed by the establishment of a reeling factory in connection with this department, where experts should be employed not only to carry on the work, but to teach all desirous of learning the art of making silk. Such an establishment would come fully within the intended scope, as I understand it, of the department of agriculture of every government recognizing the importance of developing all new and profitable industries for its people. England has recognized the wisdom of this policy in bounties for useful inventions, and in almost lavish expenditures to build up such industries as tea, and cotton, and sugar in her colonies. France gave recognition to it when, with prophetic wisdom Napoleon created an industry (the production of sugar from the beet), that has placed her to-day in the front rank of the sugar-producing countries of the world. Germany and other European countries have manifested their recognition of it by lending the power of the government to the advancement not only of the sugar industry, but of others not less considerable. With these examples before me, I have no hesitation in recommending that you urge upon the attention of Congress the importance of affording government aid to the undertaking here suggested, long enough at least to educate our people to the work. Many persons whose time would otherwise be of little or no value, would thus find profitable employment in rearing silk worms and eggs; work so light that children and delicate women could perform it in their lowly cottages, and with the money obtained from the cocoons and eggs and reeled silk procure comforts of life not otherwise to be possessed.

#### GRAPE CULTURE AND WINE MAKING.

A special study of the subject of grape culture and wine making was commenced in 1878, and advantage was taken of the presence of Dr. William McMurtrie, the agent and representative of the department to the Paris Exposition in France, and he was ordered to make an examination of the methods and practices followed in Europe, and a collection of facts and statistics relative to the industry in France and Italy. This was accomplished with as much accuracy as was possible considering the short time and limited means at his command, and report thereof made on his return. But before placing the results of this work before the people, it was considered advisable to obtain information concerning the methods already adopted in the United States, and the condition of the industry up to the present time. A circular of questions concerning soil, climate, culture, diseases, wine making, cost of installation and management, and statistics of production was prepared and distributed.

While in the replies there was almost a general expression of inability to give satisfactory statistics of the average production of the section, they show that in many parts of the country great interest is manifested in the industry, and that it is carried on with intelligence, skill, and success. Among these we may more especially mention Central New York, Southeastern New Jersey, Virginia, Northern Ohio, Michigan, Iowa, Missouri, Texas, and California. The replies also fully illustrate the necessity of furnishing American wine producers with complete and detailed information concerning the methods that have been adopted in Europe after long years of experience and study relative to the various diseases which infest the vineyards and are a continual source of great losses to the producers, and materially impede the advance of the industry. Rot, mildew, and insect injuries are reported from almost every State, and the determination of simple and ready means of obviating these causes of loss are greatly desired. The information secured in the replies to the circulars have been tabulated and will be discussed in connection with the information secured from abroad, and it is hoped that in the results of the work American grape growers and wine makers may find much to adopt for the increase and improvement of the product of their vines.

Partial statistical returns received at this department indicate that the wine made during the year 1880 may reach the gross amount of 30,000,000 gallons, worth at least twenty million dollars.

#### PLEURO-PNEUMONIA CONTAGIOSA ?

Under the act providing for an inquiry into the contagious diseases of domestic animals an investigation of pleuro-pneumonia was commenced, the result of which should declare if possible the exact extent of territory in which there existed any cattle affected with contagious pleuro-pneumonia, on account of which the Government of Great Britain had placed a restriction upon all cattle coming from the United States. After due time and a very thoroughly conducted investigation this territory was defined to be one extending at that *time* from Fairfield County, Connecticut, over New York City, and portions of the State of New York lying just north of it, Brooklyn, L. I., and parts of the island lying just east of it, Jersey City and parts of New Jersey, Philadelphia, and some of the more easterly counties of Pennsylvania to Baltimore, and over portions of the more northeasterly counties of Maryland (see map of this district accompanying Special Report No. 22 on the subject). Further than this in no locality was it possible to find a case of the disease, although efforts were made in all directions and especially among the cattle coming from the same parts of the West as did most of the cattle going to Great Britain. Previous efforts of this department, together with this examination, had aroused several of the infected States to action, and efforts made by efficient officers in those States to exterminate the disease have been measurably successful so that the infected



district represented by the map in Special Report 22 may now be corrected and the area very much reduced. Mr. J. C. Edge, secretary of the board of agriculture of Pennsylvania, having charge of this matter in that State, reports that no known case, now December 1, 1880, exists in the State of Pennsylvania outside of two herds, both of which are strictly quarantined.

Reports being constantly received, however, from England that cattle were being landed there affected with pleuro-pneumonia, a very short investigation on this side demonstrated clearly that these animals so reported upon came directly in nearly all cases from the West, and over lines of rail that were entirely away from any point at which we could locate the disease. The next step therefore seemed to be to carry the investigation to the other side, to see the diseased cattle as landed there and by means of way-bills, &c., to trace them back to their original starting points in the West, and so accomplish the object of the investigation, viz., to find *all* the infected territory. An entirely competent person for this work was selected in the person of Dr. C. P. Lyman, a graduate of the new veterinary college, Edinburgh, and well known as a veterinary surgeon in Massachusetts, his native State. So well has this gentleman acquitted himself in the discharge of this delicate and important duty that chiefly upon his action a modification of the existing order of the English council has been proposed.

Out of nearly eleven thousand beasts landed and examined in Liverpool during the stay of our inspector there, in no one of which could pleuro-pneumonia be detected in the living animal, the inspector of the veterinary department of the privy council condemned, after post-mortem examination of the lungs, only six cases. These six cases have been traced, and in all of them but one we find that the animals undoubtedly came from the West and over lines of rail entirely north of the localities which are known to be contaminated, the fact being that a good part of the eastward journey was generally made through portions of Canada. If pleuro-pneumonia exists in the West at all, or there are diseased centers in or about the points of shipment or along the routes over which the cattle passed on their journey Eastward, the information that we now possess will, it is hoped, enable us to fix the exact location after time for further examination; but there is another view of the matter which is of the utmost importance, and that is that the disease passed upon by the English inspectors *may not be the true contagious pleuro-pneumonia*, although resembling it so closely that skillful and experienced surgeons on ordinary examinations of the lungs of the cattle condemned as diseased and slaughtered in Liverpool did not hesitate to pronounce it true contagious pleuro-pneumonia.

Dr. Lyman, who ever since his return from England has been engaged in this inquiry, aided by skilled microscopists, says:

All that at present can be said is that the particular lungs exhibited present in their fresh state and to the naked eye all the lesions of the contagious disease, but on a very small scale, and in addition another lesion, which is constantly present in their

condemned lungs, which has never been described by any authority or noticed heretofore by any of our veterinarians to be a constant or even a known accompaniment of the disease.

What weight this fact may have upon the whole of this question, further pending investigation will probably soon decide. Whether these cases are or are not true pleuro-pneumonia is a matter which does not, in the mean time, have much bearing upon the question of the removal of the English embargo. While we have pleuro-pneumonia in any part of our country, and certainly while we have no national legislation looking in any way towards restricting its spread and eventual total suppression, just so long will the embargo continue to operate against one of the greatest of our commercial interests, and to lay that portion of our agriculturists in the West that are engaged in the raising of fine beef bullocks under a very severe and unmerited tax, one which, in the estimation of a very good judge of the matter, has reached during the present year to a sum upwards of \$2,250,000. What are the actual losses sustained from the presence of the disease by those farmers and dairymen in the East who are unfortunate enough to be located in the midst of a contaminated center it is very hard to say, but that the annual losses by death alone can be no very light tax to them is a safe conclusion.

Again, although it is yet possible to exterminate this foreign plague from among our herds while now confined, as we believe, to animals that are kept upon fenced farms, should it once, by any misfortune, be carried among the great herds of the West that feed upon the unfenced ranges, its extermination would become impossible, and this great and growing interest of our whole West, from Texas northward, would be permanently mortgaged (with foreclosure continually impending), notwithstanding any effort that might then be made to eradicate it. The remedy now for all of this is plain, and one of comparatively easy accomplishment, viz., let Congress enact such measures and authorize such an execution of them as shall immediately restrict the movements of diseased cattle out from infected districts, and in time eradicate every case of this pestilence of foreign origination from among our herds. This enactment should also require strict quarantine of all animals coming to our shores, either directly or indirectly, from contaminated foreign countries.

#### TEXAN CATTLE FEVER.

This disease, described in a report to this department in 1871 by Professor Gamgee, although it has never as yet reached England, and therefore has never been put upon the schedule as a contagious disease coming from the United States and requiring restriction, is yet for a short time each year a very important source of losses to Western and Northern cattle growers and shippers. Beginning generally toward the last of July it extends with increasing destructiveness until the time of frost. Western and Northern cattle brought in contact with cattle coming from Texas which themselves seemed perfectly healthy perhaps, con-

tract the disease from them, and with these it is often very fatal, killing sometimes as high a proportion as 90 per cent. of the exposed animals. It is a well understood peculiarity of this disease, however, that it cannot be communicated at second hand, i. e., that while the disease is communicated by the Texans to animals in a more Northern country through which they pass, and with these animals is nearly always fatal, yet it is not communicated by the latter to others. Its incubation may be from fifteen to forty days, and during this period the animal may be shipped from the West and slaughtered in the East, and we may again have the distressing state of affairs reported by the Metropolitan Board of Health to have existed in 1868, when an increased death rate in the city was traced directly to a consumption, as human food, of the flesh of animals sick with this fever, or the animal may be placed on board ship and started for the English market, where it is destined seldom if ever to arrive; for, dying in mid-ocean, it is thrown overboard, a total loss to its owner or those insuring. In this way some immense losses are contracted by the shippers in addition to very considerable ones by the dealers all over the West, North, and East. But the greatest sufferers of all perhaps are the breeders and feeders who are unfortunate enough to be located in the States through which the Texans journey to market. This year the States that have suffered more particularly in this way are Missouri and Illinois. An idea of how these different losses occur and how they are divided up can be had from the following statistical facts:

During June 10,642 beasts were shipped to Liverpool alone. Of these 114 died, a loss of a little over 1 per cent.

July, 12,137 shipped, 110 died, loss little less than 1 per cent.

August, 9,464 shipped, 272 died, loss little over 2 per cent.

September, 10,826 shipped, 619 died, loss over 5 per cent.

That is, the actual money lost in September was \$67,662.50 in excess of the loss in June. This excess of loss is thought by the insurance people to be entirely due to Texan fever, and to verify this we have the following quotations of insurance rates:

1st. The Canadian and English companies charge in August  $2\frac{1}{2}$  to  $2\frac{1}{2}$  per cent. from Montreal.

2d. At the same time the rate on American cattle from Boston was from 3 to 6 per cent., the higher rates obtaining against Missouri and Illinois cattle.

3d. During September the Canadian and English rates from Montreal were  $2\frac{3}{4}$  to 3 per cent.

4th. The rates on American cattle during the first half of September were 5 to 7 per cent.; the second half of the month they were  $5\frac{1}{2}$  to 10 per cent.; Ohio cattle could be insured to from  $5\frac{1}{2}$  to 6 per cent.; Missouri from  $6\frac{1}{2}$  to 10 per cent.

These differences in insurance make a total difference in the cost in England, of a cargo of say 300 beasts of \$2,635 against Missouri, \$1,312

against Ohio, as the extreme Canadian cost is but \$1,125. Of course these "rates" are based upon the actual results of experience. Being so, the question at once suggests itself, What is the cause for this difference in experience between the United States and Canada? To this the unqualified answer is that it is due to a proper veterinary inspection under proper laws, both of which are rigidly maintained by the Canadian Government. To show how much can readily be accomplished by well maintained inspection alone, I quote from a letter received from a prominent insurance firm of Boston, who have this year employed such inspection, and who would accept no "risks" on cattle unless the lot was passed by their inspector. October 27, 1880, they write: "We have made this list of ours to include the whole sickly season; it shows a loss of one and one-fourth per cent., and would show much less had we not taken a small line on 'Brazilian,' which ran into a gale on first day out. The loss on uninspected cattle during the same time has been upwards of 6 per cent."

When it is remembered that this inspection is only undertaken during the "sickly season," and to prevent the ill results arising from Texan fever alone, the facts are full of significance.

As affecting the breeders of Missouri and Illinois, it may be said that in Boston, October 5, cattle for shipment were selling at the following prices: Ohio cattle, among which there is the least risk of Texan contamination, 6 to 6½ cents; Illinois steers, 5¾ cents; Missouri, 5½ cents. That is, the Missouri farmer loses about \$15 a head on his steers, and he has to stand not only this severe loss, but in addition, during these months, the constant risk of having his herd contaminated and the additional loss by death from such contaminations. The remedy for this is plain, and already indicated by the methods of the Canadian Government, viz., proper laws properly executed; which laws can be made so that while no injustice is done the Southern breeder they will protect the interest of the Western, Northern and Eastern breeders, traders, and shippers.

#### FOOT-AND-MOUTH DISEASE.

This disease has been landed in Great Britain in several instances among cargoes of sheep, and once in a cargo of bullocks from the United States. This is a scheduled contagious disease, and these animals are now under restrictions because of it; which, of course, as long as the pleuro-pneumonia restriction remains, does not really make any difference; and probably any measures that will provide for a proper veterinary inspection will prevent any further trouble from this source.

In the recent report of the veterinary department of the privy council of Great Britain to the house of lords the statement was made that a cargo of sheep suffering with aphthous fever, or foot-and-mouth disease, had been landed at Liverpool from Boston Harbor. An order of council closing the ports of England to the further importation of live sheep soon followed this report, and since then they have been restricted to

the same conditions as cattle and swine imported from the United States, *i. e.*, slaughtered at the port where landed. At the time this order was promulgated it was not known that the disease existed in this country, but investigations immediately instituted by the department have convinced me that it prevails in several localities. The malady is scarcely ever fatal, and yields readily to proper treatment. All the information attainable as to the locality in which it prevails and the most effective treatment for its cure and extinction will be given in the annual report to which this is introductory; meanwhile, thorough inspection before shipment should stop any further trouble from this source and remove the restriction.

#### SWINE-PLAGUE.

This is also a disease occasionally carried from this country to England, and which it is now believed can be brought under such control as will prevent in future much of the loss hitherto sustained by breeders and shippers, and may in time banish it in great part, if not entirely, from among us. Dr. H. J. Detmers, who has had ample opportunities for observing the disease in the swine-raising regions of Illinois, and devoted much of his time for more than two years in careful scientific experiments in regard to it, claims to have proven, that inoculation with cultivated micrococci will, as a rule, produce a mild form of the plague, which he regards quite as efficient as a more severe attack in exempting from further contagion. During the past year he has experimented with a large number of preventives, and finds that carbolic acid, when given in suitable doses in drinking water, is a reliable agent, provided its administration is attended with a strict separation of healthy from diseased animals. It should be given as soon as the disease makes its appearance in the vicinage, and continued as long as there is any danger of infection. It may be given regularly three times a day for three weeks, without interfering in any perceptible manner with the thrift, growth, or appetite of the animal. If given after decided symptoms of the plague have appeared, it does not seem to change in any perceptible degree the progress of the malady. He says that while carbolic acid does not destroy the micrococci it appears to prevent conditions necessary for their development, and that although swine so treated may show slight symptoms of the plague, yet no serious danger need be apprehended. A full account of his interesting experiments, as well as those of Professor Law, of Cornell University, engaged in like inquiries, and of Dr. Salmon, veterinary surgeon, employed in the investigation of chicken cholera, will be published in full hereafter. Professor Law's experiments, which were commenced in July last, for the purpose of determining the liability of swine to a second attack of the plague, after having suffered from a mild attack,



induced by inoculation from cultivated virus are not at this writing complete. He says:

So far the observation seems to show that the inoculation with virulent matter cultivated at a rather low temperature in the media named, seemed to protect pigs against a fatal attack of swine-plague, but it is desirable that the matter be tested much more extensively before any general assurance is given to this effect. It is interesting to note that the appearance of a hard nodule in the seat of the inoculation, and its persistence is in keeping with the result obtained by Pasteur in his inoculations with mitigated chicken-cholera virus, and possibly implies a localization of the disease in this seat without danger to the system at large, as is the case also in lung plague in cattle. Ordinary wounds produce no such indurated new formations.

The United States cannot afford any concealment of the truth in this matter of diseases of animals. Our great market for beef and dairy produce is Britain, and the demand of the English people for cheap meat can be met only from America. It would seem from statistical statements that in the year 1874 Great Britain had reached the maximum of meat production possible on the 47,000,000 acres of land under cultivation and pasturage in the United Kingdom.

A writer in the London Times of November 17, 1878, says:

It is a matter of serious national concern that instead of having grown in number, the cattle in Great Britain in 1877 total up  $2\frac{1}{2}$  per cent. fewer than last year, and nearly 7 per cent. less than in 1874; that in 1874 we had been losing instead of multiplying in cattle and sheep. At this rate of diminution the number of head of cattle would be reduced to one half in twenty-one years. The truth equally remains that British agriculture is at this moment unable to produce as many cattle and sheep as it possessed in field, fold, and shed only three years ago; and this in spite of the stimulating prices realized from meat throughout the whole period of this decline.

From this statement and others of similar character, made by various persons interested in the agriculture of the United Kingdom, it is plain to be seen that not only must the British people seek their meat supply from other sources than their own fields, but that the demand will be an increasing one. Their deficiency cannot be supplied from any source as cheaply as from the United States.

Several bills have heretofore been introduced and proposed for Congressional action; none, however, that in my judgment are entirely adequate to the matter in hand; unless the power of the general government can be exercised within the borders of the different States and legally sustained and enforced, it is not worth while to pass any laws, other than those already enacted, authorizing an examination into the disease and the mapping out and defining of its limits, to serve in some sort as a notification to State authorities of a pestilence within their borders that may overwhelm them and prove disastrous to the entire nation. The well-known virulence and fatality of the disease, the terror felt on its appearance by other nations that have experienced its ravages, and the well-understood and dearly-learned fact that annihilation is the only effective method of suppressing and eradicating it yet discovered, certainly warrant the interference of the strong arm backed by the full purse of the general government in whatever broad prairie or corner acre a single case of pleuro-pneumonia may be found.

## LIBRARY.

Enlarged accommodations and an increased appropriation for the library is also a necessity. With the present appropriation we are unable to supply the books and periodical literature necessary to the scientists of the various divisions, to say nothing of the many valuable works which, properly found on our shelves, would be interesting to the general reader. An appropriation sufficient to have the library properly catalogued, and thus more available for ready reference, should be made. Although quite useful as it stands, it is wanting in essential things. It has now between 7,000 and 8,000 volumes. It should contain many more, and especially should it embrace every book that has ever been published on agriculture.

One thousand dollars has been the usual annual appropriation for maintaining it. Even if to be confined to the present close quarters, \$3,500 annually is the least that should be devoted to it.

## VETERINARY.

The ravages of disease in this country among various animals of economic value have become alarmingly great. How this destruction which has taken and is taking millions from the wealth of the nation may be stopped and its recurrence be modified if not entirely prevented, is a subject which demands the immediate attention of the government. In no way can the remedy be made so effective as through a suitably organized division of veterinary science attached to this department. Our correspondence, as already established, and ramifying every nook of the country, and other facilities peculiar to the department, would enable us to be informed of the existence of diseases, to investigate them and to apply remedies, and all in such manner as could be done through no other agency at anything like the same cost. The health of the people and the maintenance of their large and valuable foreign trade in cattle, now grown into an important factor of commerce, alike call for prompt action in the matter, in the direction here indicated.

## METEOROLOGY.

Meteorological observations, as determining many useful facts relating to agriculture, would justly engage the attention of a separate division of this department. To that division should be committed the determination and tabulation of all important meteorological information bearing upon agriculture; and for this purpose there should be accommodation within the proposed building, and complete sets of all meteorological instruments.

## SALARIES.

It is notorious that the officers and employés of this department receive smaller pay than those of any other department of the govern-

ment. Take by way of illustration the salary of the chemist, a gentleman distinguished for his attainments and for his work in that branch of science. He receives for his laborious and valuable scientific services the sum of \$2,000 per annum. Contrast this sum with that paid to a chemist of no more repute or ability engaged last year by the Treasury Department in an examination, at Baltimore, of sugars in which fraud upon the revenue was suspected. Occupied in this investigation five or six weeks only, this scientist received, I am informed and believe, and no doubt fairly earned, within a few dollars of four times the *yearly* salary of the chemist of this department.

Is there, I ask, the shadow of justice in so wide a difference as this? It is well known that men of scientific attainments are not usually money-making men; that their habits of thought and close attention to the investigation of special subjects in a measure lead them away from the acquisition of wealth. Working often from a pure love of science and an ardent desire to benefit his fellowman and without opportunity for pecuniary self-advancement, the scientist should always receive from his country substantial marks of gratitude for the good he has conferred upon its citizens. To place the inequality of salaries which I speak of more clearly before you, I submit the following table:

<i>Department of Agriculture.</i>	<i>Other branches of the government.</i>
Commissioner ..... \$3,500	Commissioner of Internal Revenue ..... \$6,000
	Commissioner of Patents..... 4,500
	Commissioner of Customs..... 4,000
	Commissioner of Lands ..... 4,000
	Comptroller of Currency..... 5,000
	Chief Bureau of Printing..... 4,500
	Assistant Secretary of the Treasury ..... 4,500
	Register of the Treasury..... 4,000
Chief clerk..... 2,000	Chief clerk Post-Office Department..... 2,200
	Librarian House of Representatives..... 4,000
Chemist..... 2,000	Doorkeeper House of Representatives..... 2,500
	Congressional reporters, each..... 5,000
	Examiner-in-Chief, Patent Office. 3,000
Statistician..... 2,000	Chief Bureau Statistics ..... 2,400
	U. S. Geologist..... 4,500
Entomologist..... 2,000	Register of Treasury..... 4,000
Superintendent of grounds..... 2,000	Principal Examiner of Patents... 2,400
Botanist ..... 1,800	Architect of the Treasury..... 4,500
Microscopist..... 1,800	Architect of the Capitol..... 4,500
Disbursing clerk..... 1,800	Disbursing clerk Post-Office Department..... 2,100
	Chief Division of the Treasury... 2,000
Superintendent seed division..... 1,800	35 clerks Treasury Department, each ..... 2,000

These figures show that the chemist of the department receives less than do a score or more of mere clerks in other branches of the government. Other disparities are equally apparent. I must believe, then, that when called to the attention of Congress the fact will be recog-

nized that a general increase of salaries commensurate with the work performed is not a need only, but an act of pure justice.

Bad crops in Great Britain and other European states and the disturbed condition of the Russian people, with a comparative failure of their wheat crop, have enabled us to obtain fair market prices for the immense amount of surplus food we have harvested for the past few years, and have brought returns for our agricultural labor that we should not expect or hope will continue uninterruptedly. That a change may come at any day is a matter for serious consideration not only for our statesmen, but for all classes and conditions of our people.

Our fertile virgin soil, its cheap cultivation, its accessibility, and the unprecedented rapidity and cheapness with which farm produce of all kinds may be moved, all go to stimulate production in the highest degree. That the demand for our products will keep pace with the rapid increase of production, that it will even equal the demand for the past three years, should not be hoped for, much less expected. A single good crop in Europe would undoubtedly depress our markets so as to greatly lessen the margin of profits to the producer, thus endangering the present era of prosperity, and bringing instead wide-spread disaster, not only to the farmers, but to the manufacturers, the merchants, the public carriers, and all other classes of people.

It is important, then, that no means be omitted to insure and immediately enlarge the range of our markets, whether with the Southern American States, with Mexico, or with Asia, to encourage by all means greater diversity of crops and to discourage any sudden large increase in productions of any kind, but particularly over-production of agricultural staples.

European statisticians tell us that every thirty years there are about the same number of good and bad crop years, and that having had of late their average of bad years, these countries may now hope for a number of good years to follow. This is altogether probable, and the American farmer should prepare, as far as possible, to meet a market for food products that may be glutted with the one-half of our offering.

In conclusion it affords me great pleasure to report that during the year the officers and employes of this department have performed the duties that devolved upon them in an entirely creditable manner.

I have the honor to be, respectfully, your obedient servant,

WM. G. LE DUC,

*Commissioner of Agriculture.*

38859



# INDEX.

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## A.

	Page.
Academy, Military, report of the Board of Visitors to.....	456
statement of the Secretary of War concerning.....	327
Naval, report of the Board of Visitors to.....	484
Superintendent of .....	500
statement of the Secretary of the Navy concerning.....	484
Agriculture, remarks of President Hayes concerning.....	28
report of the Commissioner of.....	1018
Alaska, statements concerning, by President Hayes.....	23
the Secretary of the Navy .....	494
Treasury .....	74
Almanac, Nautical, report of the superintendent of the.....	525
Annual message of the President to Congress.....	3
Architect of the Capitol, report of the .....	817
Army, report of the General of the .....	330
suggestion of the Secretary of War concerning the.....	307
Artificial limbs and appliances for soldiers .....	409
Assets and liabilities for the Treasury, statement of.....	120, 253
Auditor of Railroad Accounts, report of the .....	688
the Treasury, report of the First.....	213
Second.....	221
Third.....	220
Fourth.....	230
Fifth .....	248
Sixth.....	249

## B.

Balch, George B., Rear-Admiral, Superintendent of the Naval Academy, report of.	500
Banks, national.....	50, 144, 264
dividends of national .....	163
redemption of notes by national.....	175
savings, organized under State laws .....	138, 143
taxation of national .....	155, 158
Barnes, J. K., Surgeon-General, report of .....	409
Barracks and quarters, Army .....	339, 380
Marine .....	484
Beardsley, Charles, Fourth Auditor of the Treasury, report of.....	239
Benét, S. V., Chief of Ordnance, report of .....	419
Bentley, J. A., Commissioner of Pensions, report of.....	792
Blunt, A. P., Brevet Colonel, report on the Leavenworth military prison .....	356
Botanical division of the Department of Agriculture.....	1020
Bonds, redemption of, remarks of President Hayes concerning .....	17
statement of the Secretary of the Treasury concerning..	38
Boys training for seamen .....	487, 506
Brady, Thomas J., Second Assistant Postmaster-General, report of .....	942



	Page.
Brooklyn, N. Y., navy-yard .....	478, 528
Brown, N. W., Paymaster-General of the Army, report of .....	418
Building, Department, remarks of President Hayes concerning .....	28
report on the .....	462
Burchard, Horatio C., Director of the Mint, report of .....	181
Bureau of Construction and Repairs, report of the Chief of the .....	538
• Engraving and Printing, remarks of the Secretary of the Treasury concerning .....	66
Equipment and Recruiting, report of the Chief of the .....	504
Internal Revenue, report of the Commissioner of the .....	79
Medicine and Surgery, report of the Chief of the .....	481
Navigation, report of the Chief of the .....	508
Ordnance, report of the Chief of the Army .....	419
Ordnance, report of the Chief of the Navy .....	502
Provisions and Clothing, report of the Chief of the Navy .....	473
Steam Engineering, report of the Chief of the .....	532
Yards and Docks, report of the Chief of the .....	526
C.	
Cadets at the Annapolis Naval Academy .....	484
West Point Military Academy .....	327
Capitol, the, remarks of the Secretary of the Interior concerning .....	608
report of the Architect of the .....	817
Casey, Thomas Lincoln, Lieutenant-Colonel, report of, on the department build-ings .....	462
Cemeteries, National Military .....	386
Census, statement of the Secretary of the Interior concerning the .....	599
Charlestown navy-yard .....	478, 528
China, relations with, remarks of President Hayes concerning .....	11
Civil service, remarks of President Hayes concerning the reform of the .....	5, 6, 7
Claim agents, remarks of the Commissioner of Pensions on .....	795
Claims against the government .....	65
Military .....	376, 407
Clark, Edward, Architect of the Capitol, report of .....	817
Clothing and equipage of the Army .....	383
Cluss, Adolph, Engineer and Architect of the Patent Office, report of .....	822
Coast Survey, report of the Superintendent of the .....	68
statement of the Secretary of the Treasury concerning .....	68
Coinage, statement of the Secretary of the Treasury concerning .....	43, 54
Director of the Mint concerning .....	182
President .....	18
Collectors' offices, examination of, remarks of the Secretary of the Treasury on the .....	88
Collisions at sea, prevention of, remarks of the Secretary of the Treasury on the .....	64
Columbia Institution for the Deaf and Dumb .....	613, 839
Commerce, relations of the Navy to, remarks of the Secretary on the .....	493
Commerce and navigation .....	62, 64
Commissary-General, report of the .....	389
Commissioner of Agriculture, report of the .....	1018
Customs, report of the .....	212
Indian Affairs, report of the .....	623
Internal Revenue, report of the .....	79
Land Office, report of the .....	662

	Page.
Commissioner of Patents, report of the .....	807
Pensions, report of the .....	792
Soldiers' Home, report of the .....	460
Ute Indians, report of the .....	641
Comptroller of the Currency, report of the .....	122
First, of the Treasury, report of the .....	207
Second, of the Treasury, report of the .....	210
Confederate war-records, report of the .....	320, 464
Cowpens, South Carolina, monument at .....	328
Currency, report of the Comptroller of the .....	122
Customs, Commissioner of, report of the .....	212
statement of the Secretary of the Treasury concerning the revenue from .....	56

## D.

Dead letters in the Post-Office Department .....	894
Deaf and Dumb, Columbia Institution for the .....	613
Debt, public, statement of the Secretary of the Treasury concerning .....	34
Defenses, sea-coast and lake frontier .....	435
DeKrafft, J. C. P., captain U. S. Navy and hydrographer .....	512
Department of Agriculture, report of the Commissioner of .....	1018
Director of the Mint, report of the .....	181
Distilled spirits, internal revenue tax on .....	82, 107, 110
Distilleries, statistics concerning .....	107
District of Columbia, remarks of President Hayes concerning .....	29
Secretary Sherman concerning .....	75
Dividends of national banks .....	163
Drum, R. C., Adjutant-General, report of .....	334, 348
Dunn, William M., Judge-Advocate-General, report of .....	360
Duties on imports, remarks of the Secretary of the Treasury on .....	60

## E.

Easby, J. W., Chief of Bureau of Construction and Repair, report of .....	538
Education, statement of the Secretary of the Interior concerning .....	548
Egyptian Obelisk, remarks of President Hayes concerning the .....	14
Ela, J. H., Fifth Auditor of the Treasury, report of .....	248
Elections at the South, remarks of President Hayes concerning .....	4
Enlistments in the Army .....	355
Engineer Department, remarks of the Secretary of War concerning .....	320
Engineers, report of the Chief of Army .....	434
English, Earl, Chief of the Bureau of Equipment and Recruiting .....	504
Engraving and Printing, Bureau of, remarks of the Secretary of the Treasury concerning .....	66
Estimates for the fiscal year ending June 30, 1880 .....	16
Expenditures for the fiscal year ending June 30, 1880 .....	16
1881 .....	33
1882 .....	93
Exports and imports .....	59, 61
Extension and improvement of the Capitol Grounds .....	819

## F.

Fermented and distilled liquors, internal-revenue tax on .....	114
Ferris, O., Second Auditor of the Treasury, report of .....	221

	Page.
Finances, remarks of President Hayes concerning .....	16
Fisheries, remarks of President Hayes concerning .....	9
Forage for the Army .....	374
Ford, S. Calvert, Inspector of Gas and Meters .....	814
Foreign coins, value of .....	188
mail service .....	913
Forestry, remarks of the Commissioner of Agriculture concerning .....	1037
Free delivery of postal matter, statement concerning .....	899
Freedman's Hospital, report of the Surgeon in Chief of .....	844
French, Thos., Auditor of Railroad Accounts, report of .....	688
Funding the public debt, remarks of Comptroller of the Currency concerning..	148
Secretary Sherman concerning .....	38

## G.

Gallaudet, Edward M., president of the Institution for the Deaf and Dumb....	839
General of the Army, report of the .....	330
Geological survey, remarks of President Hayes concerning .....	27
the Secretary of the Interior concerning .....	588
Gilfillan, James, Treasurer of the United States, report of .....	250
Gold bullion, purchase of .....	181

## H.

Harrison, M. La Rue, Post-Office Inspector for the Money-Order System, re- port of .....	998
Hayes, Rutherford B., President of the United States, message of .....	3
Hazen, A. D., Third Assistant Postmaster-General, report of .....	965
Health of the Army .....	410
Horses, mules, and oxen purchased for the Army .....	374
Hospitals, Army .....	386
Hospital, Freedman's, report of the .....	613, 844
Insane, statement of the Secretary of the Interior concerning .....	612
report of the Board of Visitors to the .....	827
Marine, statement of the Secretary of the Treasury concerning .....	69
West Point, remarks of the Board of Visitors concerning .....	457
Hot Springs reservation .....	603
Hoyt, John W., Governor of Wyoming, report of .....	852
Hydrographic Office .....	511

## I.

Imports and exports .....	59, 61
Indian Affairs, statement of the President concerning .....	26
report of the Commissioner of .....	623
statement of the Secretary of the Interior concerning .....	544, 636
War concerning .....	317
Indian reservations, railroads through .....	554
Insane Asylum, report of the Board of Visitors to the .....	827
statement of the Secretary of the Interior concerning the ....	612
Insolvent national banks .....	176
Inspector-General of the Army, report of the .....	339
Interior Department, report of the Secretary of .....	544
Capitol extension, Architect's office .....	817
Hospital for the Insane .....	612
Indian Bureau .....	623

	Page.
Interior Department, Institute for the Deaf and Dumb .....	613
Land Office.....	576
Pension Office .....	792
Internal Revenue, report of the Commissioner of .....	79
statement of the Secretary concerning.....	58
Inter-oceanic Canal, remarks of President Hayes concerning the .....	12
Invalid pensions .....	801

## J.

Japanese Government, relations with, remarks of the President concerning....	11
Jeffers, William N., Commodore, Chief of the Bureau of Ordnance, Navy, report of.....	502
Johnson, H. C., Commissioner of Customs.....	212
Judge-Advocate-General of the Army, report of the .....	360

## K.

Keightly, E. W., Third Auditor of the Treasury, report of.....	229
King, Clarence, Director of the Geological Survey, report of .....	774
Knox, John Jay, Comptroller of the Currency, report of.....	122

## L.

Lands, Public.....	662
statements of the Secretary of the Interior concerning.....	571
Law, Capt. R. L., Chief of the Bureau of Yards and Docks, report of.....	526
Lawrence, William, First Comptroller of the Treasury, report of.....	207
League Island, navy yard at.....	529
Leavenworth military prison.....	310, 352, 356
LeDuc, William G., Commissioner of Agriculture, report of.....	1018
Legal-tender notes, remarks of President Hayes concerning.....	18
Library of Congress, remarks of President Hayes concerning.....	30
Life-saving service, statement of the Secretary of the Treasury concerning....	70
Light-houses, statement of the Secretary of the Treasury concerning.....	67
Lottery letters in the mails.....	919

## M.

MacDonald, C. F., Superintendent Money Order System, report of.....	1001
Macfeeley, R., Commissary-General, report of .....	389
Mail depredations, statement of the Postmaster-General concerning.....	898
Mann., J. B., Acting Fifth Auditor of the Treasury, report of.....	248
Marble, E. M., Acting Commissioner of Indian Affairs, report of.....	623
Commissioner of Patents.....	807
Marcy, R. B., Brigadier and Inspector General of the Army, report of.....	339
Mare Island, California, navy yard at.....	479, 529
Maps, Army.....	320
post-route.....	313
signal service.....	325
Marine corps.....	483, 541
hospitals.....	69
Maynard, Horace, Postmaster-General, report of.....	888
McCawley, Colonel, commandant of Marine Corps, annual report of.....	541
McCook, A. McD., Colonel and Aid-de-Camp, in charge of education in the Army.....	358

	Page
McGrew, J. M., Auditor for the Post-Office Department.....	249
Medical Department Army, statement of the Secretary of War concerning....	318
report of the Surgeon-General of the.....	409
Navy, report of the Surgeon-General of the.....	481
Medicine and surgery, remarks of the Secretary of the Navy concerning.....	481
Meigs, M. C., Quartermaster-General, report of.....	366
Message of the President to Congress, the annual.....	3
Mexico, relations with, remarks of the President concerning.....	12
Military Academy, report of the Board of Visitors to the .....	456
Superintendent of the.....	304
statement of the Secretary of War concerning.....	327
Military prison at Leavenworth, Kansas, report concerning the.....	356
Militia, arming and equipping the .....	313
Mint, report of the Director of the.....	181
Money-order postal system, report of the Postmaster-General concerning .....	902
Monitors, double-turreted, remarks of the Secretary of the Navy concerning...	483
report of the Chief of the Bureau of Steam Engineer- ing concerning .....	536
Monuments at Cowpens and Yorktown.....	328
Murray, Eli H., governor of Utah Territory.....	846

## N.

National Board of Health, remarks of the Secretary of the Treasury concerning the .....	71
Nautical Almanac and American Ephemeris.....	476, 512
Newcomb, Simon, superintendent Nautical Almanac, report of.....	525
National banks, remarks of the Secretary of the Treasury concerning.....	50
Naval Affairs, President's statement concerning.....	15
report of the Secretary of the Navy on.....	467
Academy, remarks of the Secretary of the Navy concerning the .....	484
report of the Board of Visitors of the.....	484
Superintendent of the.....	500
Asylum.....	530
bureaus .....	473
cruising stations.....	467
equipment and recruiting.....	474
hospital fund.....	471, 481
hydrography .....	475
Marine Corps.....	483
Observatory.....	476
squadrons.....	467
Navy pension funds, statement of the Secretary of the Navy concerning.....	471
Navy-yards, report on the, at—	
Brooklyn.....	478
Charlestown.....	478
Key West .....	481
League Island.....	478
Mare Island .....	479
New London .....	481
Norfolk.....	479
Pensacola .....	481
Portsmouth, N. H.....	478, 527
Washington .....	479
Neil, John B., governor of Idaho, report of.....	866



	Page.
Newcomb, Simon, Prof., Superintendent of Nautical Almanac, report of.....	525
New London, navy-yard at.....	481
Newspaper postage, remarks of the Postmaster-General concerning.....	894
Nichols, A. B., railroad engineer, report of.....	746
Norfolk, navy-yard at .....	479, 529

## O.

Observatory, Naval, Superintendent of the, report of.....	520
Ocean mails, statement concerning the.....	912
Official salaries, remarks of the Secretary of the Interior concerning.....	621
Ordnance, Army, report of the Chief of.....	419
Navy, report of the Chief of the Bureau of.....	502
Ordway, N. G., governor of Dakota, report of.....	860

## P.

Pacific Railroads, report of the Auditor on.....	688
Palmer, C. S., surgeon of the Freedman's Hospital, report of.....	844
Patent Office, report of the Commissioner of the .....	807
Engineer and Architect of the.....	822
statement of the Secretary of the Interior concerning the.....	597
Patterson, C. P., Superintendent of the Coast Survey.....	68
Pay of the Navy, remarks of the Secretary of the Navy concerning the.....	470
Paymaster-General of the Army, report of the.....	418
Pensacola, navy-yard at.....	481
Pensions, Army .....	792
Navy .....	471
report of the Commissioner of.....	792
Secretary of the Interior, statement of, concerning .....	593
Polygamy, remarks of President Hayes concerning .....	8
Ponca Indians, remarks of the Secretary of the Interior concerning.....	563
Pope, John, Brigadier-General, suggestions of.....	345
Portsmouth, navy-yard at .....	527
Postal savings banks.....	998
Postmaster-General, report of the .....	888
President, annual message of the, to Congress .....	3
Prison, military, at Leavenworth, report concerning the .....	356
Private Land Claims, remarks of the Secretary of the Interior concerning .....	573
Public buildings, remarks of President Hayes concerning .....	28
report of the Secretary of the Interior concerning .....	608
statement of the Architect of the Capitol concerning.....	820
Secretary of the Treasury concerning.....	72
Public lands, statement of the Secretary of the Interior concerning.....	571

## Q.

Quartermaster's Department, statement of the Secretary of War concerning...	313
report of the Secretary of War concerning.....	
Quarters and barracks.....	484

## R.

Railroad Accounts, report of the Auditor of .....	688
Railroad, Pacific, Atlantic and Central .....	582, 716, 723, 736, 756
Denver .....	347, 708

	Page.
Railroad, Pacific, Kansas.....	584, 708
Northern.....	331, 586, 731, 761
Sioux City and.....	585, 724, 761
Southern.....	586, 738
Texas.....	347, 585, 729
Union .....	581, 708
Railroads, statement of the Quartermaster-General concerning the .....	370
Secretary of the Interior concerning the.....	579
Ramsey, Alexander, Secretary of War, report of .....	305
Ration, the Army .....	393
Raum, Green B., Commissioner of Internal Revenue, report of.....	79
Receipts and expenditures of the government.....	305
Records of the war of the rebellion, preparation of the .....	329, 464
Recruiting for the Army.....	337
Navy.....	474, 506, 542
Redemption of national bank notes .....	41
Refunding certificates.....	256
Registered letters, remarks of the Postmaster-General concerning .....	895
Report of the Adjutant-General of the Army .....	334, 348
Architect of the Capitol Extension.....	817
Auditor of the Treasury, First .....	213
Second .....	221
Third.....	229
Fourth .....	239
Fifth .....	248
Sixth.....	249
Railroad Accounts .....	688
Board of Visitors to the Insane Asylum.....	827
Military Academy.....	456
Naval Academy.....	484
Brigadier-General of the Army.....	339
Chief of the Bureau of Construction, Navy.....	538
Equipment and Recruiting, Navy .....	504
Medicine, Navy.....	481
Military Justice, Army .....	311
Navigation, Navy .....	508
Ordnance, Army.....	419
Navy .....	502
Provisions, Navy .....	482
Steam Engineering, Navy .....	532
Yards and Docks, Navy.....	526
Chief Signal Officer of the Navy.....	518
Commandant of the Marine Corps.....	541
Commissary-General of Subsistence .....	389
Commissioner of Agriculture.....	1018
Customs .....	212
Indian Affairs .....	623
Internal Revenue.....	79
Land Office .....	662
Patents .....	807
Pensions .....	792
Soldiers' Home .....	460
Comptroller of the Currency .....	122
Treasury, First.....	207
Second.....	210

	Page.
Report of the Director of the Mint .....	181.
United States Geological Survey .....	774
Union Pacific Railroad .....	879
• General of the Army of the United States .....	330
Governor of the Leavenworth military prison .....	356
Governor of Dakota .....	860
Idaho .....	866
Utah .....	846
Wyoming .....	852
Hydrographer to the Bureau of Navigation .....	512
Inspector-General of the Army .....	339
Inspector of Gas and Meters .....	814
Judge-Advocate General .....	360
Paymaster-General of the Army .....	418
Postmaster-General .....	888
Post-Office Inspector for the Money-Order System .....	998
President of the Deaf and Dumb Institution .....	839
Quartermaster-General of the Army .....	366
Railroad Engineer .....	746
Register of the Treasury .....	297
Secretary of the Interior .....	544
Navy .....	467
Treasury .....	31
War .....	305
Signal Officer of the Army .....	325
Navy .....	518
Superintendent of the Census .....	810
Hydrographic Office, Navy .....	512
Institution for the Deaf and Dumb .....	613
Military Academy .....	304
Money-Order System .....	1001
Nautical Almanac .....	525
Naval Academy .....	500
Observatory .....	520
Railway Mail Service .....	957
Surgeon-General of the Army .....	409
Navy .....	481
Treasurer of the United States .....	250
United States Geological Survey .....	774
Visitors to the Insane Asylum .....	827.
Resumption of specie payments, remarks of the President on .....	17
Secretary on .....	40
Comptroller on .....	124
Treasurer on .....	253
Revenue marine, statement of the Secretary of the Treasury concerning .....	73
Revenues for the fiscal years 1881 and 1882, estimates of the .....	33, 35
Reynolds, R. M., First Auditor of the Treasury, report of .....	213
River and harbor improvements, report of the Secretary of War concerning .....	322
Rodgers, John, Admiral, Superintendent of the Observatory, report of .....	520

## S.

Sanitary conference in Washington, remarks of President Hayes concerning the .....	14
Schurz, Carl, Secretary of the Interior, report of .....	544
Schofield, G. W., Register of the Treasury, report of .....	297

	Page
Schofield, J. M., Major-General, Superintendent Military Academy, report of..	304
Scott, Capt. Thomas N., report of, on the publication of war records .....	464
Sheridan, P. H., Lieutenant-General, report of .....	344
Sherman, John, Secretary of the Treasury, report of .....	31
Sherman, W. T., General of the Army, report of.....	330
Shock, W. H., Chief of the Bureau of Steam Engineering, report of.....	532
Silver, purchase and coinage of.....	18, 184
Silver coinage, remarks of the President on .....	18
Secretary of the Treasury on.....	43
Director of the Mint on.....	184
United States Treasurer on .....	257
Signal Office, Army, report of the Chief Signal Officer .....	518
Navy, report of.....	518
Soldiers' Home, Commissioners of the, report of the.....	460
South Pass of the Mississippi River, improvement of.....	306
Specie payments, resumption of .....	18, 50, 124, 253
Spirits, distilled, statistics concerning.....	107
Stamps, postal, report on .....	894
Star mail-service.....	896, 944
Standard silver dollar, statement of the Secretary of the Treasury concerning the .....	46-50
State, War, and Navy Departments building, report on the .....	462
Steam Engineering, Naval Bureau of .....	532
Subsistence Department, report of the Commissary-General .....	389
Superintendent of the Military Academy, report of the.....	304
Naval Academy, report of the .....	500
Surgeon-General of the Army, report of the .....	409
Surgical records of the Army, division of.....	411

## T.

Taxation of national banks.....	155, 158
Taxes, reduction of, statement of the Secretary of the Treasury concerning....	36
Telegraph, military .....	327
Tenth Census, remarks of the Secretary of the Interior concerning the.....	599
Texas, military sites in, purchase of .....	392
Thompson, R. W., Secretary of the Navy, report of .....	467
Tobacco, internal-revenue tax on .....	104
supply of, to the Army .....	317, 399
Torpedo defense, Army.....	321
Naval .....	486
Townsend, E. D., Adjutant-General of the Army, report of.....	389
Trade in American and foreign countries, remarks of President Hayes on.....	15
the Secretary of the Treas- ury on.....	62
Training boys for seamen .....	487, 506
Transportation for the Army.....	370, 372, 870
Treasurer of the United States, report of the .....	250
Treasury, report of John Sherman, Secretary of the .....	31
Tyner, James N., First Assistant Postmaster-General, report of .....	929

## U.

Union Pacific Railroad Directors, report of the.....	879
United States notes.....	256
Upton, W. W., Second Comptroller, report of .....	210

	Page.
Utah Territory, remarks of President Hayes concerning .....	8
report of the Governor of .....	846
Ute Indians, remarks of the Secretary of the Interior concerning .....	561

## V.

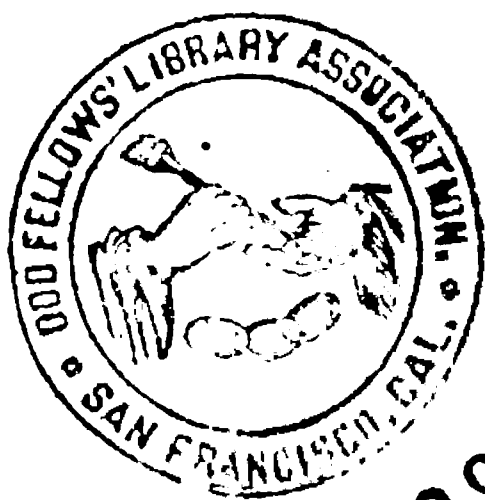
Venus, observations on the transit of .....	524
Veterinary Division of the Department of Agriculture .....	1046

## W.

Wagon transportation for the Army .....	372
Wales, Surgeon-General of the Navy, report of .....	481
Walker, Francis A., Superintendent of the Census .....	810
War records, Union and Confederate .....	329, 464
War, report of Alexander Ramsey, Secretary of .....	329
Washington, navy-yard at .....	479, 529
Wells, C. H., Chief Signal Officer, report of .....	518
Whiting, William D., Commodore, report of .....	508
Williamson, J. A., Commissioner General Land Office, report of .....	662
Wright, H. G., Major-General, Chief of Engineers, report of .....	434
Wyoming Territory .....	615, 852

## Y.

Yards and Docks, Bureau of, report of the Chief of .....	526
Yellowstone National Park .....	605
Yorktown, Virginia, monument at .....	328



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